

Flight, May 9, 1930

# FLIGHT

The  
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AND AIRSHIPS

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## DIARY OF CURRENT AND FORTHCOMING EVENTS

Club Secretaries and others desirous of announcing the dates of important fixture are invited to send particulars for inclusion in this list—

1930	
May 9	De Havilland Aeronautical Technical School Dance, Portland Rooms.
May 10	N.F.S. Air Meeting, Leeds.
May 10	Parnham Country Club Meeting, Beaminster, Dorset.
May 14	Shell-Mex Luncheon to Dukes of Bedford and Capt. C. D. Barnard.
May 15	Banquet to Lord and Lady Wakefield, Savoy Hotel.
May 17	Flying Display and Opening of Brooklands Aero Club.
May 31	Official Opening and Air Pageant, Bristol Airport.
June 1	Ashwell-Cooke Challenge Cup, Lymington.
June 7	N.F.S. Air Meeting, Reading.
June 9	Northampton Flying Club Meeting.
June 12	Isle of Wight Flying Club Meeting, Shanklin.
June 13	N.F.S. Air Meeting, Nottingham.
June 14	Manston Garden Party.
June 21	Household Brigade Flying Club Meeting at Heston.
June 21	Air Rallye at Haldon Aerodrome, Teignmouth.
June 26	Ipswich Air Pageant.
June 27	R.A.F. Dinner Club Annual Dinner.
June 28	Royal Air Force Display, Hendon.
July 5	King's Cup Race and Hanworth Air Pageant.
July 19	N.F.S. Flying Meeting, Leeds.
July 19	N.F.S. Flying Meeting, Hull.
July 20	International Light Plane Tour of Europe, starting from Berlin.
Aug 7	Norwich Flying Meeting.
July 21	Entries close for 1931 Schneider Trophy Contest.
Sept. 1-5	5th International Air Congress, The Hague.
Sept. 6-11	.. .. .
Sept. 21	.. .. .
Sept. 22	.. .. .

## EDITORIAL COMMENTS



MAJORS in peace time being limited by finance, the Royal Air Force cannot at one and the same time provide the Navy and the Army with the eyes they need, the offensive and defensive air power they require to defend this country against air attack, furnish an independent air force for offence, and undertake extensive police duties in the outer parts of the Empire." So wrote Major-General Sir Frederick Maurice in *The Times* of April 16. FLIGHT has frequently expressed a similar opinion, and we are gratified to find such an able ally as Sir Frederick Maurice. His list could, as a matter of fact, have been drawn up in a less terrifying manner, for the defence of this country and the provision of an independent air force for offence are but one function. Likewise, from the financial point of view, the Royal Air Force does not have to provide the Navy with eyes and air power, because the Admiralty pays the cost of the Fleet Air Arm. But we have written before, and we repeat it, that it is not right for the Air Estimates to be saddled with the cost of providing the Army with the eyes which it needs and the air power which it requires. There are also objections, as a matter of fact, to the method by which the cost of the Fleet Air Arm is included in the Air Estimates, though balanced against an appropriation-in-aid. It is apt to lead to confusion of thought. Even an expert such as Sir Frederick Maurice may overlook the real facts for a moment, as he seems to have done, and the ordinary taxpayer is naturally far more prone than the expert to grumble at the gross total presented by the Air Estimates.

In fact, the whole of the very interesting discussion on the functions of the Royal Air Force, to which *The Times* has opened its columns ever since the debate in the House of Lords on April 9, has been confused by the multiplicity of the activities now undertaken by the Royal Air Force. The various writers have been unable to grasp the fact that these activities include action which is not only defensive but is definitely

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for various reasons to leave these activities in the hands of the Royal Air Force for the present, but this course is certain to lead to confusion of thought, and it makes it doubly incumbent on those who would discuss basic principles to distinguish carefully between what is properly air action and what is not.

Sir Frederick Maurice, in the passage quoted above, sums up these activities under four heads. Another writer who signs himself "Aeronaut" gives (in *The Times* of April 22) three headings:—(1) Home defence, (2) Reconnaissance, offensive, and protective duties for a fleet at sea or an army in the field or independent offensive action, and (3) Empire defence, including control without occupation, and reconnaissance of trade routes. "Aeronaut's" letter was in several respects one of the most useful contributions to the discussion, but we think that it shows insufficient clarity of thought to distinguish between

With a fairly fresh wind off directly into wind, it is essential to point out that the machine then runs the water across the spray which, up to 100 m.p.h. one is now part of the propeller without letting it do; once left rapidly, provided reach her hand. At this point, much lower speed. She and I have two or three

and offensive air action, and to classify the same category as naval and military action. We would ourselves classify the present activities of the Royal Air Force as follows:—(1) Air defence of Britain, the term "defence" including air action which is tactically offensive, (2) Empire air and (3) ancillary operations for the two older parts of the Air Force: the last is not. The Air Force should not be relieved of either of the first two duties without damaging the interests of the Empire. It should surrender the last function without any loss to the Empire. It only performs co-operation work for other services for certain reasons of convenience, which concern such matters as training and supply, and these reasons may well cease to be effective in due course. In the meantime, aircraft engaged in helping the Navy or the Army to do their own proper work as effectively as possible are not, strictly speaking, taking air action or sharing in air defence work. They are playing a useful but ancillary part in naval action or military action.

It would help in making matters clear if terms could be defined and limited in their application. "Air defence" should only be used when enemy aircraft may be encountered, that is to say, in a major war. In the Empire, where no enemy aircraft will be met and the hostile forces are more or less savage, air action may be taken either by itself or in conjunction with naval or military action. The operations may be termed police work. Air action may take various forms in the Empire. In Iraq the position of the Royal Air Force has aptly been termed control without occupation. Whenever a campaign against savages has to be undertaken it is a matter for discussion, on the merits of each case, which of the three services it is best to employ. Usually the question is one of terrain. Up the great rivers of China, for instance, the Navy has often been able to act by itself, using guns and landing parties against an enemy on the banks. Over desert country it is usually best to

employ the Royal Air Force, with its armoured cars as well as its aircraft. In mountainous country the powers of aircraft are circumscribed, and in such a terrain the chief part usually has to be played by the Army.

Sir Frederick Maurice wrote that police duties in the outer parts of the Empire are clearly a secondary matter to the other functions of the Royal Air Force. This is surely putting the matter too strongly. No one denies that London is the most important spot in the British Empire and Great Britain the most important country. But none the less the Empire must be defended and policed. Each of the three services has to play its part in Home defence and Empire defence alike. The taxpayer can obtain relief when that service is used which can most efficiently and most cheaply deal with the work in hand. Sir F. Maurice said that the Royal Air Force failed in Palestine during the disturbances. Lord Trenchard admitted that the circumstances there were not suitable for isolated air control and that ground troops should have been retained there. It seems that it was not economic to place Palestine under the control of the Air Ministry. It is a problem for the Army. So, mainly, is the North-West Frontier of India. It is not fair to the taxpayer, nor is it the best thing for the cause of flying, to ignore the limitations of aircraft. There are fanatics who seem to think that an aeroplane is a Robot which can do anything from saving a soul to waiting at table. FLIGHT has no sympathy with persons of that kidney. But we do believe that in the Empire there are many places where it would be an error to make more use than is now done of the Air Force.

In our issue of March 28 we suggested the Gulf as one such spot. Lord Trenchard took our suggestion and raised the point in the House on April 9. Lord Beatty threw cold water on our suggestion, but Air Commodore Samson has previously conclusively proved the feasibility of the idea. It is doubtless receiving full consideration from the Committee of Imperial Defence, which has already commenced an inquiry into the whole question of extending the use of the Royal Air Force.

We should like, in conclusion, to emphasise the point that an extension of Air Force activities in the Empire ought not in any way to retard the building up of a sufficient force for the air defence of Great Britain. The latter must call for gradually increasing expenditure. The former should make for economy. It is not the carrying out of these two necessary functions which overburdens the Air Ministry and unduly inflates the Air Estimates. We repeat that those Estimates ought not to carry, or appear to carry, the burden of the army air squadrons, the Fleet Air Arm, the schools of Navy and Army co-operation, and the other accessories which have nothing to do with air defence but are solely connected with the aerial side of naval and military defence.

#### Lord Trenchard's New Appointment

MARSHAL OF THE ROYAL AIR FORCE LORD TRENCHARD has been elected a director of the Goodyear Tyre and Rubber Company.

#### League of Nations Aircraft

THE question of whether the League of Nations should have a resolution has been

as to make this possible, but the main object of the draft is to secure special facilities for aircraft flying on the business of the League. The draft resolution is now under discussion, and Lord Cecil has given the draft to the Government for approval of the usual route of the course with the League and Nigh taking at the throttle. I am



# The Royal Aero Club of the United Kingdom

OFFICIAL NOTICES TO MEMBERS

REPORT of Meeting of the Committee of the Royal Aero Club, held at 3, Clifford Street, London, W.1, on Wednesday, April 16, 1930, at 5 p.m.

**Present:**—Lieut.-Col. M. O'Gorman, C.B., in the Chair. Air Vice-Marshal Sir W. S. Brancker, K.C.B., A.F.C. Griffith Brewer. Lieut.-Col. M. O. Darby, O.B.E. Major C. J. W. Darwin, D.S.O. Brig.-Gen. Sir Capel Holden, K.C.B., F.R.S. Col. F. Lindsay Lloyd, C.M.G., C.B.E. John Lord. Lieut.-Col. Sir Francis K. McClean, A.F.C. Lieut.-Col. J. T. C. Moore-Brabazon, M.C. Major H. A. Petre, D.S.O., M.C. Air Commodore C. R. Samson, C.M.G., D.S.O., R.A.F.

The following appointments were made for the year 1930:—**Chairman:** The Rt. Hon. Sir Philip A. G. D. Sassoon, Bart., P.C., G.B.E., C.M.G., M.P. **Vice-Chairman:** Lieut.-Col. M. O'Gorman, C.B.

**Stewards of the Club under the Competition Rules:**—Brig.-Gen. The Duke of Atholl, K.T., G.C.V.O., C.B., D.S.O. The Rt. Hon. Lord Hugh Cecil, M.P. Lord Cozens Hardy. Brig.-Gen. Sir Capel Holden, K.C.B., F.R.S. Lieut.-Col. J. T. C. Moore-Brabazon, M.C. Col. Sir Joseph Reed.

**Election of Members.**—Ft.-Lieut. Richard Llewellyn Roger Atcherley. Rupert Redvers Brickwood. Major John William Pender Chalmers. Walter Hardy Guthbert. Flight-Lieut. Louis Massey Hilton, D.F.C., A.F.C. Norman Edward Holden. Capt. Donald Ian Menzies Kennard. Flying Officer Michael Vine May. Horace Grenville Moss. Reginald Arthur Neale Shutte. Eric Ernest Stammers. William Baynes Whitelaw.

## Aviators' Certificates.

9000	John Dermot Campbell	..	National Fl. Services.
9001	Alexander Kelway Bamber	..	
9002	Walter John Stopford	..	Berks, Bucks & Oxon Ae. C.
9003	Hubert Pinkard Lavender	..	Leicestershire Ae.C.
9004	Charles Henry Tutt	..	London Ae.C.
9005	John Eric Duncan Holder	..	National Fl. Services.
9006	James Hudson Montgomery	..	Hampshire Ae. C.
9007	Roy Bruce	..	De Havilland Fl. School.
9008	The Marchesa Louise Nadja Malacrida	..	National Fl. Services.
9009	Frederick Rennick	..	Newcastle-upon-Tyne Ae.C.
9010	Oswald Victor Holmes	..	Berks, Bucks & Oxon Ae.C.
9011	Elise Williams	..	National Fl. Services.
9012	John Carne Hargreaves	..	Household Brigade Fl. Club.
9013	Philip Ernest Noble	..	Airwork Fl. School.
9014	Leslie Joseph Goulden	..	Cinque Ports Fl. C.
9015	John Sherrill Welsh	..	Lancashire Ae.C.
9016	Arthur Stanley Preist	..	De Havilland Fl. School.
9017	Alexander Clarke Stevens	..	Surrey Fl. Services.
9018	Norman Adrian de Bruyne	..	Marshall's Fl. School.
9019	George Thompson	..	Yorkshire Ae.C.
9020	Joseph Edward Yardley	..	Midland Ae.C.
9021	Lionel Ward	..	R.A.F. Graduation Cert.
9022	John Brookes Hall	..	Midland Ae.C.
9023	Bosworth E. Monk Goldman	..	London Ae.C.
9024	Roland Charles Thring	..	London Ae.C.
9025	Alexander George Vlasto	..	Phillips & Powis Fl. School.
9026	John Walker	..	Newcastle Ae.C.
	John Granville Loch	..	Royal Air Force.
	Reginald Bryans	..	Airwork Fl. School.
	John Lyon	..	London Ae.C.
	Joseph Seymour Tanaer	..	Berks, Bucks & Oxon Ae.C.
	George Sydney Rob-	..	
	ertson	..	London Ae.C.

9032	George Morgan Harris	..	London Ae.C.
9033	Irene Agnes Brooke Sewell	..	Henderson Fl. School.
9034	Noel Christie Singer	..	Royal Air Force.
9035	Thomas Alfred Hayden	..	Hampshire Ae.C.
9036	Geoffrey Louis Bodoano	..	Hampshire Ae.C.
9037	Arthur David Torlesse	..	Hampshire Ae.C.
9038	Salah El Din Abaza	..	Surrey Fl. Services.
9039	Alexander Calvert Miller	..	Newcastle Ae.C.
9040	Thomas William Hay	..	Hampshire Ae.C.
9041	Guy Richard Charles Wyndham	..	Henderson Fl. School.
9042	Ian Greig Robertson	..	Hampshire Ae.C.
9043	Walter Fraser Anderson	..	Royal Air Force.
9044	Edward M. C. Abel-Smith	..	National Fl. Services.
9045	Hamer Fraser Bagnall	..	Airwork Fl. School.
9046	Leslie H. Talbot Cliff	..	Cinque Ports Fl. C.
9047	Kenneth H. Fraser Waller	..	Cinque Ports Fl. C.
9048	John Vincent Rushton	..	Midland Ae.C.
9049	William Humble	..	Yorkshire Ae.C.
9050	Arthur Frank Eayrs	..	Nottingham Ae.C.
9051	Georges Hanet	..	National Fl. Services.

## 1930 SUB-COMMITTEES

**Racing Committee.**—Air Vice-Marshal Sir W. S. Brancker, K.C.B., A.F.C. Lieut.-Col. W. A. Bristow. Lieut.-Col. M. O. Darby, C.B.E. Major C. J. W. Darwin, D.S.O. Col. F. Lindsay Lloyd, C.M.G., C.B.E. Major R. H. Mayo, O.B.E. A. R. Goodfellow R. Ashley Hall, Flt.-Lieut. D. W. J. Bonham-Carter, representatives of the General Council.

**Technical Committee.**—Major T. M. Barlow. Major J. S. Buchanan, O.B.E. R. S. Capon. Sqdn.-Ldr. T. H. England. D.S.C. W. O. Manning. Major R. H. Mayo, O.B.E. Lieut.-Col. M. O'Gorman, C.B. Lieut.-Col. H. W. S. Outram, C.B.E. Sqdn.-Ldr. M. E. A. Wright, A.F.C.

**Schneider Trophy Committee.**—Lieut.-Col. O'Gorman, C.B. Lieut.-Col. W. A. Bristow. Lieut.-Col. M. O. Darby, O.B.E. Air Commodore C. R. Samson, C.M.G., D.S.O., R.A.F. Capt. C. B. Wilson, M.C.

**Finance Committee.**—Griffith Brewer. Ernest C. Bucknall. Lieut.-Col. M. O. Darby, O.B.E. Lieut.-Col. Sir Francis K. McClean, A.F.C. J. Stewart Mallam.

**House Committee.**—Ernest C. Bucknall. Major A. Q. Cooper, D.S.C., A.F.C. Major H. J. Corin. F. P. Jackson. J. Stewart Mallam. Major H. A. Petre, D.S.O., M.C. Major S. V. Sippe, D.S.O.

**Joint Standing Committee.**—(R.Ae.C., R.A.F.S., and Air League) Lieut.-Col. M. O'Gorman, C.B. Col. J. T. C. Moore-Brabazon, M.C. Major H. A. Petre, D.S.O., M.C. (R.Ae.C. and S.B.A.C.)—Air Vice-Marshal Sir W. S. Brancker K.C.B., A.F.C. Lieut.-Col. M. O'Gorman, C.B. Major R. H. Mayo, O.B.E. Lieut.-Col. Sir Francis K. McClean, A.F.C.

**General Council (Associated Light Aeroplane Clubs) (Royal Aero Club representatives.)** Capt. H. S. Broad. Lieut.-Col. M. O. Darby, O.B.E. Col. F. Lindsay Lloyd C.M.G., C.B.E. Lieut.-Col. Sir Francis K. McClean, A.F.C. Lieut.-Col. M. O'Gorman, C.B.

**Touring Committee.**—Major K. M. Beaumont, D.S.O. Capt. H. S. Broad. Major C. J. W. Darwin, D.S.O. A. H. Downes-Shaw. A. C. M. Jackaman. Major H. A. Petre D.S.O., M.C.

**Flying Services Fund Committee.**—Lieut.-Col. Ala Dore, D.S.O. John Lord. Major H. A. Petre, D.S.O., M.C.

**Vacancy on the Committee.**—Major A. R. Goodfellow was co-opted to fill the vacancy on the committee.



## THE ANTWERP EXHIBITION

AS one of the signatories of the Treaty of 1830 guaranteeing the Independence of Belgium, and as a leading maritime and colonial power, it was to be expected that Great Britain would make a special effort to have a worthy display in the International Maritime, Colonial and Flemish Art Exhibition which is being held at Antwerp in celebration of the Belgian Centenary: the exhibition opened on April 26 and continues until October.

Details announced by the organisers of the British Government section—the Department of Overseas Trade—show that the exhibit, which was opened to the public on May 5, is most comprehensive and highly spectacular. The British Government is spending £100,000 on the exhibit, and the exhibits themselves are a combination of the historical and modern. They review in miniature the development of the Empire, of navigation and shipbuilding, of aeroplane construction—and of the British race itself.

The Court of Honour is the pivot on which the two wings of the building turn. In its centre is a map of the world in relief with blue water for the seas and very small model ships, electrically propelled, traversing the great trade routes, and showing the various stages of development of the Empire during the 100 years that have passed since the event which the Exhibition commemorates. Around this Court are reconstructed the cabins of famous British ships—Drake's *Golden Hind*; the Pilgrim Fathers' *Mayflower*, etc., and many other interesting items covering British progress on sea, land and in the air.

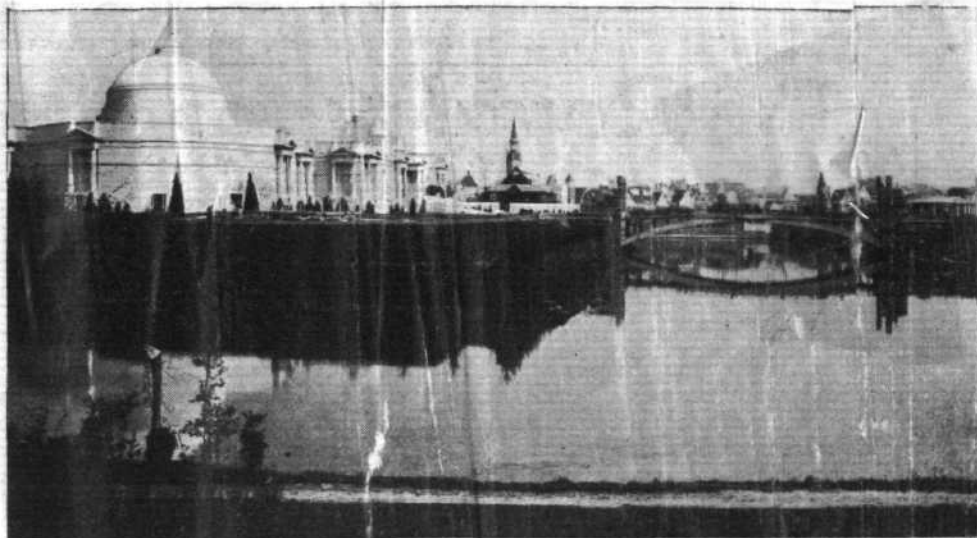
Models of fighting ships from a war canoe to the present-day *Nelson* and *London* show the development of British sea power over a period of 1,000 years, and 70 half-inch scale models of service and civil aircraft form a unique review of British aeronautical progress from 1908 to 1930.

The aeronautical exhibits may be summarised as follows:—

**Imperial Routes.**—A large scale map of the world showing the existing and proposed air transport lines in the British Empire and the airship bases and mooring masts now in existence, and possible sites for future use on the British Empire routes. When these projected air lines come into being they will total approximately 35,000 miles. This exhibit includes photographs of the *Argosy*, *Hercules*, *Calcutta* and the Handley-Page 40-seater, the machines used on the British Empire air routes.

**Some Famous British Long-distance Flights.**—A series of photographs of British machines which have been flown on famous long-distance flights. Since 1919 Great Britain has been one of the pioneer countries in such flights.

**Schneider Trophy.**—The history of this contest is shown, together with a model of the winning machine, the Supermarine Rolls-Royce S.6, the actual Schneider trophy, and a list of the international records now held by Great Britain.



The British Government Pavilion in the Belgian Centenary Exhibition at Antwerp. The British section, which was opened on May 5, includes a comprehensive aeronautical exhibit.

**Development of British Aeronautics.**—The 70 half-inch scale models, comprising both service and civil machines, illustrate the progress of British aeronautics from 1908 to 1930. Among this unique collection will be seen A. V. Roe's triplane, in which he successfully flew in 1908, the *Vimy*, flown by Alcock and Brown on their first transatlantic flight; the "D.H.50" on which Alan Cobham has flown to far distant parts of the Empire; the Fairey monoplane which did the famous non-stop flight of 4,420 miles; and many others.

**Aircraft Engines.**—The Rolls-Royce Company, with the consent of the Air Ministry, have lent one of the famous aero engines which was used in one of the Schneider Cup machines when the famous race was won by Great Britain last year. On another stand will be seen the Armstrong-Siddeley "Leopard," one of the most powerful engines used, capable of 1,000 h.p. In comparison to these two powerful engines will be seen the famous "Cirrus" engine, lent by the Cirrus Company.

**Airships.**—A quarter-inch scale model of the rigid airship R.101, built by the Royal Airship Works, Cardington. A model showing passengers leaving the top of the mooring tower and entering the airship at the nose, and also a plan of the passenger accommodation on an airship.

**Other Models** include one showing the interior of the passenger, luggage, etc., accommodation of the 40-seater Handley-Page air liner, which will be used by Imperial Airways, Ltd., on their Empire air routes.

**Photographs.**—A series of big photographs show the R.101 and the R.100 attached to the mooring tower, and the two airship sheds at Cardington. The length of each shed is 812 ft., by 180 ft. wide, and 156 ft. high. The Nelson Column in London, which is 142 ft. high, could easily be put inside one of these sheds. One of the most interesting photographs depicts the British and Italian seaplanes that took part in the Schneider Trophy contest. All six machines are seen at rest on the water before the race started.

**Famous Prints.**—A collection of famous prints, kindly lent by Mr. J. Hodgson, and shown under the auspices of the Royal Aeronautical Society, illustrates the early days of ballooning.

## MILAN AERO SHOW

HUGE crowds visited the Italian Aero Club's aircraft show at this year's International Fair of Milan, not only on account of increased interest now displayed by the public in aeronautics, but because motor boats and engines were also included. We give below a few notes of the aeronautical exhibits seen in this section of the Fair.

The "Breda" exhibits included the light "Breda 15" seaplane and a complete collection of models of other Breda machines, while the landing-gear (both with wheels and with snow skis) of the "Breda 15" was also shown separately. In the special building of the Breda Co., together with the products of their gun factories, there was the land version of the "Breda 15" and a very interesting heavy-type machine gun for aircraft.

Distinct improvements were noticeable in the 1930 edition of the "Breda 15"; for example, the landing gear is of the split, oleo-pneumatic type, while a special device allows of lowering both ailerons when landing in order to obtain a braking effect.

Fiat's exhibits included the "C.R. 20" fighter, powered with the Fiat "A.20" 430 h.p. engine, and the complete range of Fiat aero engines, with and without reduction gears. In the special Fiat building the Fiat "A.1" biplane fitted with the Fiat "A.50" radial engine was on display.

An elaborate exhibit was prepared in common by Franchini Co., the S.I.S.A. flying-boat factories, "S.A.M." air-lines. The display included the complete set of the well-known Isotta Fraschini "Asso" engine.



which the new "Asso 1,000" with reduction gear and a maximum output of 1,200 h.p., is the latest development in Italian aero engines. The chief attraction for the general public, however, was the big, imposing "S.55," double-hull, passenger-carrying flying-boat, powered with two "Asso 500" Isotta Fraschini engines. This aircraft has already proved its exceptional air and sea-worthiness in many different enterprises (De Pinedo's transatlantic flights, the Mediterranean cruises of squadrons of the Italian Air Force, the expedition in the Arctic Sea to the rescue of the survivors of the ill-fated polar airship "Italia," etc.), and is now employed by the S.A.M. Co. for their air lines in the Mediterranean Sea.

Perhaps the largest number of visitors was recorded at the Caproni exhibit, where this old-established company showed two of their latest products—namely, the light "Caproni 100T" fitted with the Isotta-Fraschini "Asso 80 Ri" engine, and the 12-seater "Caproni 101" monoplane fitted with three Lorraine engines. This latter machine constitutes a successful achievement of the Italian industry in the field of commercial passenger-carrying machines; the luxurious and comfortable interior was particularly noticeable.

Interest was also shown in the display of models of "Caproni" aircraft, including that of the new "Caproni 6000" fitted with six "Asso 1000" Isotta-Fraschini engines, claimed to be the largest aeroplane in the world. The machine has already established six new world's records.

Alfa-Romeo exhibited the well-known "Jupiter" and "Lynx" engines manufactured under licence, and the new "Romeo D. 200 h.p.," a very interesting engine and the first Italian radial engine of this power.

The Aero Club's exhibit included some interesting "flying models" and a small glider. It is hoped that gliders, which are gaining at present much popularity, will be shown next year in larger numbers.

The "Officine Ferroviarie Meridionali" exhibited two "Ro 5" type light 'planes, fitted with the Fiat "A.50" engine, one with the open cockpit, the other with limousine cabin.

Among minor exhibits were the "Spiga" wheel of nearly 8 ft. for the "Caproni 6000" bomber, the "Pirelli" tyres, the "Renuzzi" variable-pitch propeller, the light alloys of the "Società Leghe Metalliche Leggere," and the silencer for "Jupiter" engines of the "S.A.L.V.A."

Foreign exhibitors were few and limited to some French aero engines, such as the Renault 85 h.p. for light aeroplanes, the 200 h.p. Lorraine, and the 500 h.p. Farman, inverted type.

In conclusion, judging by the keen interest taken by the general public in this year's Aero Show and other aviation matters, it would seem that the extensive propaganda carried out by Government Departments and by the Aero Club of Italy has succeeded in creating well-developed air-mindedness among the people of Italy.

C. DE R.



AT MILAN AERO SHOW : At the top is the combined exhibit of Isotta Fraschini, S.I.S.A. (the Savoia 55 flying-boat), and S.A.M. Air Lines. In the centre, the Caproni stand, with the "6a.101," 12-seater three-engined monoplane and the "100 T" light biplane; and below, is the Breda stand. Here was the very neat "Breda 15" light seaplane.

#### France—S. America Air Mail

THE French airman, M. Mermoz, on May 1, left Marseilles with the first regular mail to be carried all the way by air to South America.

#### Sport Flying at Johannisthal

WE learn from *Flugsportliche Rundschau* that the first German flying field, the Johannisthal Aerodrome, has been opened for sporting purposes and sporting progress in aviation. Every foreign visitor will be welcomed and heartily expected to pay a visit. The purpose of Johannisthal

Aerodrome is especially for sporting lines, such as the establishment of records and other sporting activities. All inquiries should be addressed to the "Arbeitsgemeinschaft zur Forderung des Sportflugplatzes Johannisthal c/o The Editor, Mr. Gustav E. Macholz, Berlin-Johannisthal, Kaiser Wilhelmstr 45."

#### Rocket Aeroplane Crashes

THE German pilot, Herr Espenlaub, was injured at Bremerhaven on May 1 when he crashed in a rocket-propelled tail-less aeroplane.

# PRIVATE FLYING AND CLUB NEWS

**A**T SHOREHAM on Saturday, May 3, George Pretzman, Ltd., held their first Air Pageant. Few pageants can have been run in the face of greater difficulties. The low sea mist was right down on the ground until past 3.30 p.m., and even then it only lifted in patches, and machines which endeavoured to amuse the crowd were constantly lost on the top of loops and so on. Wing-Commr. Pretzman was greatly handicapped by a lack of helpers and when the crowd broke through all the barriers, there was no one to stop them crowding round the machines and risking their necks when anyone started up his engine. The A.A. men worked hard, but what could three do against a crowd of some thousands?

The Air Ministry Representative who was attending the meeting on behalf of the Royal Aero Club with authority which enabled him to control the air traffic, had his work cut out, but by superhuman efforts he managed to arrange matters so that there was no untoward incident which marred the day's proceedings although one pilot, it is true, gave him a large number of new gray hairs when endeavouring to enliven the proceedings with some low and spectacular flying. The programme as arranged had to be abandoned, but by dint of gentle persuasion the "official controller" was able to get a fairly frequent stream of machines into the air which kept the crowd interested.

The results do show, however, that a large, willing and well trained staff is absolutely necessary to the successful running of such shows. Barriers to keep the crowd in their correct enclosures and away from the machine park must be strongly made so that there can be no chance of the aircraft being surrounded by inquisitive small boys whose fingers are often tougher than the wing fabric.

In spite of the weather some twenty machines eventually arrived, many of them having waited on the Downs while the mist on the aerodrome cleared a bit.

Among the "turns" was one very neat impromptu formation which carried out some pretty turns and dives, Lt. R. Bentley on the Shell-Mex Hermes-Moth was the leader with Flt.-Lt. T. Rose on the Pratt's Cirrus III-Moth and F/O. S. A. Thorn on the Cirrus Engine Co.'s Hermes-Avian following. Several of the pilots present assisted with aerobatic displays and although the show was admittedly somewhat scrappy, the public got a large amount of flying for their money.

Wing-Commr. Pretzman will be running the meeting at Weymouth on June 26, and we sincerely hope that he will not be the victim of such unfortunate circumstances on that occasion because there is no doubt that there will be a large crowd drawn from that district, and if he gives them a similar programme to that which the Shoreham audience should have had they should be well pleased.

**THE YORKSHIRE AIR PAGEANT, May 10.**—Members are requested to apply immediately for windscreen labels for their cars, and for guests' tickets if they will be accompanied by friends. N.F.S. Members and their cars are admitted free, but it is essential that the member should produce his membership card. Guests' tickets for Club enclosure are 2s. 6d., and guests' car tickets are 1s.

**A Group of the Cinque Ports Flying Club members.**  
(FLIGHT Photo.)

**NATIONAL FLYING SERVICES, LTD.**, have decided to apply the flying rates now in force at Hanworth Park to all N.F.S. Clubs as from May 1. The rates are as follows:—

Dual Instruction .. .. .	£3 per hr.
Solo instruction .. .. .	£2 10s. per hr.
Solo flying (first 25 hr. solo on N.F.S. machines during the calendar year)	£2 per hour.
Solo flying (after 25 hr. solo in any calendar year in N.F.S. aircraft or can produce evidence of 50 hr. solo in last 12 months) .. .. .	£1 10s. per hour.

**CINQUE PORTS FLYING CLUB.**—The Fourth Monthly Competition for the Ashwell-Cooke Challenge Cup was flown at Lympne on Sunday, May 4. The weather was exceedingly bad, as a sea mist blew across the aerodrome at a height of about 100 ft.; in consequence, the start of the competition was postponed until 17.30 hrs. At that time, the mist cleared off the immediate vicinity of the aerodrome, although the surrounding country was still covered, and it was obvious that we could expect no entries from outside the club. The result of the competition was as follows:—

Name	Aircraft	Gross Score (Poss. 100)	Net Score on Handicap
1. R. Dallas Brett	Mark II Moth	75	70
2. Lt.-Comdr. T. S. B. Gubbins, R.N.	Mark II Moth	50	50
3. L. H. T. Cliff	Gipsy Moth	20	15
4. H. K. F. Waller	Mark II Moth	(Disqualified)	

The conditions were more difficult than previously, as there was no wind, and no competitor pulled up in the 75 yards allowed, the shortest run being 135 yds. by the winner, who was the only competitor to gain any marks for distance run. Lt.-Comdr. Gubbins' performance was very creditable, as he had only 7½ hrs. solo experience.

The next competition will be held on Sunday, June 1, at 15.30 hrs, and it is hoped that the club will get better support from private owners.

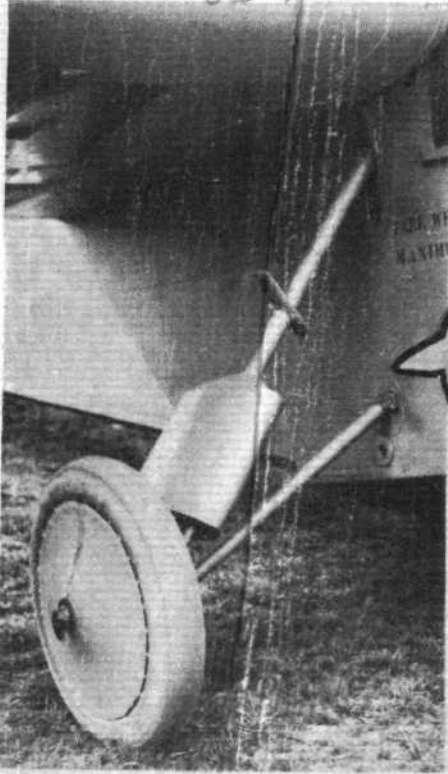




# A PRIVATE OWNER'S AMPHIBIAN

859

8602



8600



9598

8601

Above we show a selection of views of Mr. Norman Holden's "Cutty Sark." The clear view forward from the cabin can be seen, as also the wide track of the undercarriage. On the right is Mr. Holden, Mrs. Holden and Mr. E. Hordern (pilot). (FLIGHT Photos.)

FIT 1/4" MS. BOLT WITH 3/8" O.D.  
DISTANCE PIECES THROUGH PLY.  
COMPLETE WITH LARGE DIA. WASHERS  
OUTSIDE & 1/2" x 17 G. TUBE. DISTANCE  
PIECES TO POSITION PULLEYS.  
INSIDE: ALLOW 1/16" SIDEPLAY  
PER PULLEY.

MATERIAL: M.S.B.

12G M.S. PLATE

2 1/2"

3/8" R

1/4" M.S. BOLT

3/32" PIN HOLES

1/2" R

4 1/2"

LINER TUBE 3/8" O.D. x 1/4" I.D.  
SWEATED IN POSITION.

LINER TUBE 18G  
TUBE FLATTENED AT END  
& SPLIT TO TAKE 12G PLATE

DICKSON

This week we are able to publish the controls of the Dickson Glider and on the following page will be found a few notes referring to general details which should be taken care of. Next week we hope to have ready the final drawings which are the pulley mounting details and a general control wire G.A.



**A WARNING.** The time seems full ripe for a word of warning to all private owners and in fact to all others who fly in a civilian capacity. It is a very regrettable fact that when the average younger man has learnt to fly, his first idea is to proceed to his home town or to that of his best friends and show them how well he can handle his machine by throwing it about in an alarming manner. Now this sort of thing may impress a few, but it undoubtedly antagonises a very much larger number of the spectators because these exhibitions are always given at an altitude of "no" feet, and we do ask pilots who feel tempted to show off to remember that by doing so in this manner they are jeopardising their own and indeed everyone's chances of making aviation popular within a short time. For example at the Bournemouth Hard Court Tennis Championship Meeting a Moth, we are told, came and flew so low on three occasions that play had to be stopped; and at a certain country resort with a suitable landing ground close to it, where kindred spirits are wont to forgather, it is an unwritten law that no one shall stunt over the neighbouring town, but lately some pilots who have arrived there announced their arrival by a low aerobatic exhibition which can do nothing except make the inhabitants thoroughly fed up with all those who fly. Most probably all the occasions on which such things have happened have been the result of thoughtlessness, and we do ask all pilots to remember that they are still pioneers, and on them therefore falls the onus of making flying popular with the multitude.

**LANCASHIRE AERO CLUB.**—Poor visibility spoilt what might have been an excellent week, since April 28. In spite of this, two successful First Soloists were launched, Mr. C. S. Goodfellow completed all tests for his R.Ae.C. Certificate, Mr. Walsh obtained his "A" Licence, and Messrs. Dand and Oddy completed their Figures of Eight.

G-AAEC, which was flying again on Saturday, was the machine which was wrecked a fortnight ago, and Messrs. A. V. Roe & Co., Ltd., have rebuilt it at five days' notice—a very remarkable achievement.

There are at present 39 members under regular instruction.

**Gliding Section.**—Some valuable experience has been gained by the Gliding Section, which should be passed on to other Gliding Clubs. An attempt was made to launch the glider off the level with the use of two motor-cars in place of the usual launching team. The first attempt nearly ended in disaster; the cars pursued divergent courses in order to give the pilot plenty of clearance; the pilot zoomed the machine up to a height of about 50 ft.; the result was that the elastic never became slack and only came loose from the hook after giving a sharp tug downwards to the nose of the machine. A second flight resulted in a fine effort of 240 yards on the level, but at a third attempt the cars accelerated too rapidly and the elastic parted at the point of attachment to one of the cars. Whipping back at high speed it smashed the front of the machine and bruised the pilot's shoulder. Neither injury was severe, but the following lessons were deduced from the experiment:—

1. The cars should follow a parallel course about 30 yards apart.
2. Their maximum acceleration should not exceed 6/8 m.p.h.
3. It is advisable to use a length of rope round the attachment hook and further lengths at the point of attachment to the cars with Sandow elastic in between.

### Proposed Brooklands Aero Club

It is hoped to found a flying club in connection with the B.A.R.C. The main object of this club will be to provide solo flying at a cheap rate. A new metal Moth with slots has been provided, and solo flying will be at the rate of £2 per hour. All pilots must be passed as O.K. by the Brooklands School of Flying. The proposed annual subscriptions are as follow:—

**Existing B.A.R.C. Members.**—£1 1s. No entrance fee. **Full B.A.R.C. Membership with flying facilities.**—Subscription £6 6s., entrance fee £5 5s., or subscription £7 7s., no entrance fee. **Flying Members.**—Subscription £4 4s., entrance fee £3 3s. Membership carries full use of B.A.R.C. premises, also aerodrome clubhouse and bar. Entrance to Brooklands with car on race days included. Passengers to be paid for at ordinary rates. No ladies' badges. **Associate Members.**—Subscription £1 1s. Entrance fee 5s. Full use of B.A.R.C. premises, also aerodrome clubhouse and bar. This membership is to suit those who are in the habit of visiting Brooklands by air. Full payment of ordinary

**THE DICKSON GLIDER.**—All surfaces should be varnished internally and painted at points where the fabric touches with non-sticking paint.

On the main 'planes the ribs are to be taped together. There should be two lines of tapes running between and parallel to the spars, spaced equally. The tapes are to be run on top and bottom of ribs, crossing through the wing through each pair of ribs, so that from behind or in front the tapes have a lazy-tongs aspect. The fabric should now be sewn to ribs, the stitches being passed right round the whole rib and through the fabric, blanket stitching being used. Each stitch, 2 in. from its fellow, must be knotted. Note that the fabric should not be tacked to the woodwork, but should be sown together to form a sheath.

Strips of fabric should be doped on all sewn joints and rib stitching, and the whole surface should now be doped. A scheme of doping can be obtained from any dope manufacturers, who will also supply the right kind of dope for the job.

Care must be taken that all components are "rigged up" square, and that there is no twist in the wings. The assistance of an aircraft rigger is of great use in this connection. The ailerons should be "rigged-up" 2 degrees on both sides.

All wooden components must be carefully varnished to prevent damp damaging them. All metal fittings must also be painted. Care must be taken that all wooden parts attached to one another are correctly glued before screwing or pinning.

**LONDON AEROPLANE CLUB.**—The total flying time for the month of April was 267 hrs. 35 min. April was not a good month from a flying point of view.

Miss E. J. Muntz and Mr. J. W. H. Harrison qualified for their "A" Licences.

It is now practically certain that the Club will not be moving from Stag Lane this year. The Club is negotiating with the De Havilland Company for the acquisition of a number of lock-ups to accommodate the privately-owned aircraft of the members.

**INTERNATIONAL TOURING COMPETITION.**—Herr G. von Hoepfner, the General Secretary of the Aero Club of Germany, is making a tour by air of the course to be used in the International Touring Competition for Light Aeroplanes. On Wednesday, April 30, he reached England and visited the Municipal Air Port at Bristol and the Heston Air Park, London, and he was afterwards entertained to dinner at the Royal Aero Club.

Herr von Hoepfner took the opportunity of discussing the general arrangements of the competition with Major C. J. W. Darwin and Commr. H. E. Perrin, representing the Racing Committee of the Royal Aero Club.

**THE MODEL AIRCRAFT CLUB.**—Since the first notice which appeared in last week's issue, calling attention to the fact that a full-size Glider Section was to be formed, sixteen applications for membership have been received.

Mr. J. B. McDowell, O.B.E., M.C., and Mr. B. Compton Paterson have also handed in their applications.

Those who are interested should forward their names, together with any helpful suggestion, to John Welding, 404, King's Road, Chelsea, S.W.

fees if entrance to track is made by road. There will be no landing fees for members, but visitors who do not wish to join in any capacity will be charged 2s. 6d. each landing. The club aeroplane is fully insured, but members will not be covered by the club against any kind of personal risk, so they and any passengers carried must make their own arrangements in this respect. Subscriptions will date from January to December. No one who has been interested in the Brooklands School of Flying, or any ex-pupil of theirs, need feel that they are taking away business from the B.S.F. as the new club will be working in conjunction with the school. Should anyone be interested in any of the above classes of membership, A. Percy Bradley, the Clerk of the Course, would be glad to have a promise of support as soon as possible. Any such promise will not be considered as binding. If sufficient support is forthcoming the club will be formed, and Mr. C. S. Burney, late of the B.S.F. and himself a pilot, has agreed to act as Secretary. It should be added that if any dual instruction is required it must be done at the Brooklands School of Flying.

# CORRESPONDENCE

[The Editor does not hold himself responsible for opinions expressed by correspondents. The names and addresses of the writers, not necessarily for publication, must in all cases accompany letters intended for insertion in these columns.]

## PROGRESS AT TOLLERTON

[2302] It is with pleasure one notices the progress being made at Tollerton (Nottingham) with the National Flying Services' buildings and accommodation which is nearing completion, and one looks forward to the near future when the N.F.S. machines will be permanently housed there and when more aircraft will be available for cross-country flights. Flying during the winter months at Tollerton has been difficult, owing to the state of the aerodrome, but with the present dry weather improving the surface, and the extra facilities available when the buildings are finished, one feels that this season will be one of much increased flying activity for Nottingham.

It seems a pity, however, that N.F.S., subsidised by the British government, should find it necessary to install petrol pumps of American manufacture.

Derby.

E. DONALD WYNN.

April 5, 1930.

## GLIDING

[2303] The foundation of gliding clubs in England satisfies the writer's hopes, but of all that is said and written on the subject little has been mentioned of the great service gliding will, without any doubt, render to the complete conquest of the air.

I feel that this new sport would find far greater support were its usefulness and possibilities generally known.

The Great War has produced high-powered and efficient aircraft, but whereas the internal-combustion engine has been perfected, perhaps, to the highest degree, wing design lags very far behind.

Take a starling, for instance. This bird, though suffering the disabilities of small size, has a lifting ratio of over 10 lbs. per sq. ft. of wing area, as compared with a modern light aeroplane of nearer 6 lbs per sq. ft. fully loaded.

A bird can easily carry in its claws weights of nearly half its own weight, which in the case of the above example would increase the capacity to about 15 lbs. per sq. ft. wing area.

On the other hand, the light aeroplane is assisted by its comparatively wide wing span and a very powerful propulsion unit.

This clearly shows the scope for improvement in wing design of the aeroplane, and the glider represents a far better means of exploiting these possibilities than the power-driven machine, where much of the sensation of balance and air control is eliminated by the terrific drawing force of the very efficient engines.

May I suggest that those interested in the development of the science of flight should turn their attention to flexibility, rather than rigidity of design, and criticise with a view to improvement, the present methods of wing construction, and the theories which have created these methods.

I would, to conclude, point out that my two examples above are taken respectively, from a bird weighed, measured and dissected for the purpose by the writer, and from a light aeroplane recently described and specified in your columns.

DAVID G. SADLER.

Abbots Langley,  
Herts.

## AIRSHIP ENGINES

[2304] It is with interest I read the notes published regarding the Airship Development's new craft, but I was struck with the fact that you state that there is no suitable airship engine giving low revolutions per minute in production, and that the gearing down of a Hornet engine is being resorted to.

There is an engine I have in mind which, although no longer in actual production, should be obtainable in single units, namely, the famous 30 Green with a normal running speed of 1,200 r.p.m., at which figure I believe somewhere in the region of 80 h.p. is developed. This engine was used by Hinkler on the Avro Baby, when he made the first non-stop flight to Rome. Also it was extensively used by the Government for airship work, the "Beta" being powered with a 30 Green.

I do not think I am wrong in saying this engine would be ideally suitable for use in the Airship Development's new craft, and by application to the proper quarter they could doubtless obtain one for experimental purposes.

Richmond, Surrey.

A. DE B. SAUNDERS.

April 2, 1930.

[Note.—The Green engine referred to developed about 40 h.p., not 80 h.p.—Ed.]

## MODEL AEROPLANE RECORDS

[2305] I have read with interest the letters from J. van Hattum and H. H. Dowsett under the heading of "Power-Driven Models," and congratulate Mr. Dowsett on his great achievement with his petrol-engined model aeroplane. I think it a pity he did not take steps to have his two four-minute flights officially timed by the Model Aircraft Club, of which he is a member, or by the Society of Model Aeronautical Engineers, to which his club is affiliated, and thus have had his flights officially recognised as British model aeroplane records. I am sure the officials of the S.M.A.E. would welcome the opportunity of placing Mr. Dowsett's flight upon the list of British model aeroplane records if and when his flights are timed by two official time-keepers of the S.M.A.E. or any of its affiliated clubs. Mr. Stanger's record has stood for about 16 years.

Mr. Dowsett was extremely modest in not mentioning his performance, which I presume was accomplished before his article was published, when giving a description of his model, and this has led to sceptical people naturally assuming that the model had no performance. If a model aeroplane is described as capable of a certain performance, or designed to accomplish such, little notice is taken of it because it rarely does what the designer claims for it. Mr. Dowsett published particulars of his model to interest other people. As it was, the article interested hundreds of your readers, but if it had been stated that two four-minute flights had been witnessed by Mr. Courteen it would have interested thousands of readers, and would have rendered the correspondence on the subject unnecessary. The secretary of the S.M.A.E. is Mr. S. G. Mullins, 72, Westminster Avenue, Thornton Heath, with whom I suggest Mr. Dowsett should communicate.

Wembley.

May 2, 1930.

W. E. EVANS.

## FLYING OLD-TYPE AIRCRAFT

[2306] In view of your announcement that M. Prevost proposes to fly a 1911 Deperdussin Mono at Vincennes during the Whitsun meet, one is prompted to ask if it is not possible to re-erect a few of our own old machines and include them in this year's Display.

Surely it would prove a popular as well as an instructive item to see, say, a Maurice Farman "Longhorn" and "Shorthorn, BE2C, a "6" or two, and—perhaps this is hoping too much—an old G.W. Box-kite. Add to this their being flown by their original pilots and what a show for the younger generation!

A. SOUTH.

Clapham Common, S.W.11.

April 27, 1930.

## "FRESH FLEET FUNCTIONS"

[2307] Assuming that the article on page 780 of the *Aeroplane*, dated April 30, headed "Fresh Fleet Functions," refers to a cover advertisement in *FLIGHT*, then it may be of interest to you to note that the photograph in the *Aeroplane* for April 23, on page 757, showing the fleet in Malta harbour is entirely wrong—it's Gibraltar harbour!

May 1.

FLIGHT-LIEUT., R.A.F.

[We thank our correspondent for the above letter. It should, however, be realised that the cover referred to was entirely an advertising department matter, while our contemporary's photograph was an editorial responsibility.—ED.]

## Foreign Orders for Irvin Chutes

LARGE contracts from Greece and Belgium have been received by the Irving Air Chute of Gt. Britain, Ltd., for Irvin Air Chutes, Belgium having chosen the Irvin Back Pack. Soviet Russia has also chosen Irvin parachutes for the Soviet Air Force. Recently the Government placed orders with the Irving Co. through the Amtorg Trading

Corporation of New York, valued at nearly £150,000. This order is one of the biggest parachute orders received from a foreign country for military purposes. The Irving Co. will establish a factory in Soviet Russia, probably in Moscow, under terms somewhat similar to those arranged with Poland, which has a factory established at Warsaw. Thirty foreign Governments are now using Irvin parachutes.





**THE GLOSTER "GNATSNAPPER"**: This is a Single-seater Fleet Fighter, fitted with Armstrong Siddeley "Jaguar VIII" Engine. The pilot on the occasion when these photographs were taken was Flying Officer H. J. T. Saint, D.S.C., Gloster's Chief Test Pilot. (FLIGHT Photos.)



# AIR TRANSPORT

## THE CHANCE AUTOMATIC WIND INDICATOR

A RECENT addition to the lighting equipment at the London Airport, Croydon, is a "Chance" type automatic wind indicator, the most advanced of its kind in the world. It has been built to the order of the Air Ministry by Messrs. Chance Brothers and Co., Ltd., the lighthouse engineers and constructors of Smethwick, Birmingham, an all-British firm which was a pioneer in coastal and seaport lighting some 80 years ago.

plates, with a central box section enclosing the slip rings, ball bearings, and braking device. The whole is covered with duralumin sheeting, and all essential parts rendered weather-proof. The upper surface of the "T" is painted yellow, and constructed as an inverted "V" to make it impossible for snow to collect.

Non-rusting materials are used throughout, and ample ball bearings ensure permanent and accurate operation. The



Two views of the Chance Automatic Wind Indicator now installed at Croydon Airport. On the left a "close-up" and on the right a view from the air.

(FLIGHT Photos.)

The wind indicator, as can be seen by the illustrations, takes the form of a letter "T," mounted horizontally on a vertical steel structure, and free to rotate with the wind.

The design of this indicator is such as to provide a sensitive but stable instrument, which not only registers winds as light as 3 m.p.h., but is provided with a patent braking device, whereby sudden variations in wind directions, due to cross gusts, are interpreted without violent oscillations. The indicator can be locked at will in any desired position, so that the best landing direction can be indicated in a calm.

Illumination at night is secured by means of "Neon" type tubes outlining the letter "T," and placed in double rows, so that failure of any tube still leaves unimpaired the continuity of the lines of light. Current is taken from the mains, and the switch is located in the control tower. The transformers, chokes, fuses and switches are mounted either in the revolving "T" head, or in the steel supporting structure.

The construction is simple but substantial, and is of duralumin tube, and bar mounted in aluminium former

overall size of the "T" is 20 ft. long by 10 ft. wide at the head, the reflecting surface being 2 ft. wide. The mild-steel structure carrying the "T" is of the openwork type, and 14 ft. high.

Not the least interesting fact about this wind indicator is that it is equally effective in daylight, and far superior to the "wind sleeve," which has been universal hitherto. The advantages of the automatic "T," a precision instrument of sturdy construction, can be appreciated most thoroughly by stating the disadvantages of the "wind sleeve." The latter is comparatively fragile, it needs constant renewal, it is liable to be blown to ribbons on a gusty day or wound round its supporting mast, so that no wind indication is available.

On a day with light winds, no true indication of direction is given, because the sleeve hangs almost vertically. Before the "wind sleeve" can be of use to a pilot, he has to locate it, and this is often a difficult matter under conditions of bad visibility, whereas the automatic "T" on or adjacent to the aerodrome is a conspicuous structure.

### The South African Air Mail

DURING the first six months of the operations of the air mail services run by Union Airways, Ltd., from Capetown to Durban and Johannesburg, the machines (Moths at first, now being supplanted by Fokkers) have flown a total of 130,000 miles and carried 165 passengers and 6,161 lb. of mail matter without a single mishap. No penalty has been incurred by the company under the Union Government subsidy agreement.

The actual mail flights have numbered 162, but private trips have brought the total number of flights up to 245. The average time for a flight between Capetown and Johannesburg was 11 hrs. 57 mins., representing a speed of 82.32 m.p.h. Between Capetown and Durban the time was 10 hrs. 18 mins. and the speed 86 m.p.h. Only nine times did a mail plane fail to complete its trip within a day, and on three of these occasions the reason was the late arrival of the steamer at Capetown.



## CIVIL AVIATION SUBSIDIES

## New Powers Acquired

**T**WO interesting points emerged from a debate in the House of Commons Committee on Monday, May 5. One is that it will be possible for subsidies to be granted to a company which in the future may be operating commercial airships. The other is that, comparing British Imperial air services with Imperial air services of other countries, the British Empire stands second to the United States in actual mileage. The figures given are: United States, 46,622; British Empire (not counting the forthcoming service to the Cape), 20,850; France, 17,500; Germany, 16,500; Italy, 7,803.

Mr. MONTAGUE, Under-Secretary of State for Air (Islington, W.) moved the following resolution on which to found the Air Transport (Subsidy Agreements) Bill:—

That it is expedient to authorize the President of the Air Council to agree, with the approval of the Treasury, to pay subsidies to any persons and to furnish facilities for their aircraft, in consideration of those persons maintaining in accordance with the agreement a regular service for the carriage by air of passengers, goods, and mails, and to authorise the payment out of moneys to be provided by Parliament of any sums required by the President for the fulfilment of any such agreement;

Provided that the aggregate amount of the subsidies payable under all such agreements shall not exceed £1,000,000 in any financial year, and no subsidy shall be payable under any such agreement after December 31, 1940.

He said that the reason for the resolution and the Bill was that after full consideration, it had been found desirable that the Secretary of State for Air should in future have statutory authority to make long-term agreements for air transport services entailing the payment of subsidies. This had been found necessary all over the world for civil aviation in its present state. A number of agreements had been made in the past and would be made in the future, notably in connection with the air service to South Africa, which it was hoped to institute before the end of the year, and in connection with an extension of the air service to Australia, which was now under discussion with the Government of Australia.

The debate which followed was not of great interest. Sir Samuel Hoare said that the resolution and the Bill were quite unnecessary, and were a work of departmental pedantry. Lieut.-Com. Kenworthy vented his spleen on airships and on the Air Ministry as at present constituted. Capt. Balfour could not see that there was much prospect of making Imperial Airways a self-supporting economic proposition when the present agreement had expired.

## A STRIKING SPEECH.

Mr. Montague, replying to the discussion, made a very interesting speech. He said that as to the question of constitutional usage, agreements had been made in the past without statutory authority for the period of the agreements, but in future agreements would be made under statutory authority for the full period whatever change in Government or in Parliament there might be. In regard to the provision that the subsidies were not to exceed £1,000,000 in any financial year, that did not mean that the full amount was likely to be expended in any single year. He only wished there was such a prospect, in the interest of civil aviation. This year, the total amount of the subsidy paid to Imperial Airways was £335,000. Subsidies, in fact, were diminishing. Appropriations in aid had also to be taken into account in relation to subsidies. In relation to the expenditure that would be incurred for the South African service there would be appropriations in aid from the South African Government and other Governments concerned in the areas

which the service would cover. It would be possible to give subsidies for the commercial development of airships.

## BRITISH AIR MILEAGE

It was not strictly correct to say that this country was seventh in order of aerial mileage. Taking Imperial services as the basis of comparison, this country was not seventh but second. The total number of British Imperial aerial miles flown was 20,850, without taking into account the projected South African service. That was the second largest, the first being the United States, with 46,622 miles. France came next with 17,500 miles, and then followed Germany with 16,500 and Italy with 7,803. Our standard of efficiency in aircraft manufacture, and, what was most important, our standards of safety, bore very favourable comparison indeed with similar standards in any other part of the world.

No one regretted more than he did that it had been impossible so far to find a solution of the problem in the West Indies. It was a problem which had to do not only with Air Ministry initiative, but with the whole question of finance. It was a matter of inter-Imperial communications, and not of Imperial communications, and that being so, it was necessary that there should be interest to the extent of practical and financial assistance coming from the Colonies concerned. There was not much prospect of that at present. The Colonies were poor, with the exception of Trinidad, and even so far as Trinidad was concerned there was not much chance of obtaining any financial support at present. That did not mean, however, that the Air Ministry was leaving anything undone that could be done in order to get aviation services going in the West Indies. On the contrary, they were doing everything possible. They had an eye, also, on the larger, the Imperial, issue of the relations between Canada and South America.

It had been suggested that military needs had a crippling effect on civil aviation and the civil aviation industry. That was not the case. Military aviation did not control the policy or the work of the civil aviation side of the Air Ministry. From the standpoint of research, of design and structure, and of ground organisation, military and civil needs were almost precisely the same. They could not, at the present moment, be separated. The whole thing was one, and it would be, not only unwise but disastrous for civil aviation if it were taken away from direct association with military needs. So far as the industry was concerned, it would be true to say that, but for military needs, there would be no civil aviation industry at all in this country. The industry depended on the demand for military machines, and in the actual conditions of the production of craft the two sides were inextricably mixed and could not, with any advantage, be divided at present, whatever might be the possibility in the future. He could assure hon. members that there was no actual interference by the military side with the fullest possible development of civil aviation.

An hon. member had expressed the hope that the Air Ministry had not in mind any question of war purposes. It was well to be frank. The Air Ministry had in mind war possibilities. That was part of the business of the Air Ministry. Aerodromes were serviceable in time of war; pilots were necessary in time of war; particular kinds of planes were required. How far airships or the ordinary commercial plane might be adaptable he did not know, but an Air Ministry must have these things in view. It must take account of the fact that routes were probably not only commercial but strategic when they were considering the subject of potential war, but that was not the same thing as saying that war policy or war ideas governed the question of aviation from the Ministry side so far as commercial development was concerned.

With regard to the route *via* Athens to Alexandria, the negotiations were still being continued with the Italian Government, and it was expected that before long a satisfactory arrangement would be made for a route to be undertaken *via* Corsica and Naples.

The resolution was agreed to and reported to the House.

## New Air Mail Leaflet

THE Postmaster-General announces that the Spring edition of the Air Mail Leaflet, which gives particulars of the air mail services available for correspondence posted in this country, will be issued on May 1. It includes an inset containing details of the direct air service to India, and a ready reckoner for calculating the air fees and postage payable on correspondence intended for transmission by the Indian, Australian, and South African air services. Copies of the leaflet will be sent to regular users of the service, and can also be obtained free of charge at any post office. In order to avoid any risk of error, regular users of the air services are advised to consult the new leaflet regarding the particular services in which they are interested, as a number of changes have been made. Only those services are now included which are known from experience to give normally a definite advantage as compared with the ordinary services. Some of the European air services offer advantage only for correspondence posted in the provinces, and others only for correspondence posted in London; and in such cases the new leaflet contains suitable indications. Special attention is drawn to the new night air service to Belgium, which should ensure first delivery in Brussels of letters posted in London the previous evening; and to the projected night service to Germany, due to commence on May 15, which

should ensure delivery in Cologne the same evening, and in Berlin about noon the following day, for letters posted at the General Post Office before 3 p.m. The public are also reminded that the Indian Air Mail is now timed to reach Egypt in 2½ days, Iraq in 3½ days, and India (Karachi) in 6½ days. The latest time of posting—6 a.m. every Saturday at the General Post Office, London—remains unaltered. Numerous letters are still being received for transmission by the P. & O. service to Port Said and thence by air to Iraq, although the cancellation of the service was announced some time ago. Air letters for Iraq can now only be sent by the Direct Indian Air Service, and the air fee is 3½d. per ½ oz., in addition to the ordinary postage.

## Belgrade-Salonika Air Service

AN air service between Belgrade and Salonika was opened on May 4.

## Dutch Air Line to Australia

THE reported extension of the Dutch East Indies Air line from Sourabaya to Sydney, via Darwin and Brisbane, is stated to be premature. Only the technical possibilities have been studied so far.

## The Junkers G.38

THE Junkers G.38 monoplane, claimed to be the largest in the world and equipped with four engines developing 2,000 h.p., has been passed for freight service in Germany.

## Oxford v. Cambridge Balloon Race

A BALLOON race between Oxford and Cambridge is being planned for Commemoration week. The Oxford Balloon Club has already been formed and an inaugural ascent was made in March. A similar club is now being formed at Cambridge.

## French Air Minister at Oran

M. LAURENT-EYNAC, the French Air Minister, opened the Congress of the National Aeronautical Federation at Oran, Algeria, yesterday. He and his party flew to Oran from Algiers in a British Short "Calcutta" flying-boat, which was recently bought by the French Air Ministry.

## CROYDON WEEKLY NOTES

**F**EELING air minded, and suffering from an insatiable air wanderlust, I made a flying visit on an Argosy and W. 10 to Paris, Basle, and Zürich on Friday, April 25, returning to Croydon the next day. What a marvellous sight it is, to see the mountains shining in the sun—"gold tipped"—like innumerable Valhallas—while the rhythm of the engines conjures up the mighty music of Wagner, Beethoven and Mozart in one's soul. Returning, we ran into bad weather near Paris, and decided to keep a look out for the "Graf Zeppelin," which we believed was somewhere in the neighbourhood.

We were apparently well after her, for she passed over Croydon about 3.45 p.m., at about 1,000 ft. altitude—looking very majestic.

Sunday (April 27) saw a repetition of much unnecessary work in the control tower, wireless, and duty offices, owing to a few of the numerous private owners returning from their Continental tour failing to carry out the "circling and reporting" regulations, as explained before—How selfish it all is!!! The A.D.C. shops have the appearance of being very busy, and large numbers of engines are continually despatched to various countries, including Germany, Canada, Poland, and Italy.

The esteemed Mr. Olney is as energetic and charming as ever, which largely accounts for this activity. On Saturday, April 26, Capt. Neville Stack's Hermes Moth emerged from the A.D.C. hangars, resplendent in bright red and cream, for a test flight by F./O. S. A. Thorne, who put up a fine show, as indeed he always does. The machine appears to be very fast, and "Stacko" was jubilant when he took her away on Sunday.

A fairly accurate computation shows that 877 passengers and 45 tons of freight passed through Croydon aerodrome last week—*Nachtflugsport* is still going strong!

On April 25 I had the pleasure of witnessing the "take off" of H.R.H. the Prince of Wales from Le Bourget, accompanied by a large escort of French Military aeroplanes. A very imposing and delightful spectacle.

Hundreds of distinguished visitors awaited the arrival of Her Grace the Duchess of Bedford, at Croydon Aerodrome, on April 30, and great excitement prevailed when the news spread that G-EBTS had passed over Lympne at 5 p.m.

Mr. Sydney St. Barbe dashed to his S.E.5a and climbed to 10,000 ft., where he proceeded to write "BRAVO" in the sky; he had been told that the wind was N.W. 25 m.p.h. at 10,000 ft., but suggests that somebody left a "nought" out of their calculations, for it seemed more like 250 m.p.h.; he started writing over Woolwich, and finished up half-way to Portsmouth. Nevertheless, it was a very artistic piece of skywriting.

G-EBTS came to rest after a superb landing, at exactly 5.30 p.m., and the enthusiasm of the crowd knew no bounds. All kisses, handshakes, cheers, congratulations, movie-tones and beautiful bouquets. One cannot help commenting upon the very kind act of Her Grace, who, later on, while attempting to enter her car outside the Aerodrome Hotel, was besieged by a crowd of autograph hunters—rather than disappoint them she, although obviously tired out, stood for a considerable time smiling and signing her name for the importunate multitude.

A humorous incident occurred, when one cinema man, having asked Her Grace to pose for a few minutes, said, "Thank you, Lady Bailey"!!

A most interesting and enjoyable evening was spent listening to Charlie Barnard's and Bob Little's graphic accounts of their hazardous flight. Stories of lions, tigers and elephants, calculated to make your "flesh creep," like Dickens' "Fat Boy"—added to which, Jenkins narrated his experiences with Mackintosh, of chasing bears in the Caucasus Mountains, and finding bear's hair on their wing tip on landing.

My mind flew back to another intrepid airman, who encountered eagles in the Alps—and my own experience of brigands in the Balkans. It seems, therefore, that Lewis guns will become an indispensable part of the equipment of all future long-distance record machines.



THE FLEET ABOVE: A Fairey Flycatcher (Jaguar engine) flying over Malta. Below can be seen the hangars of the seaplane station.



# AIRISMS FROM THE FOUR WINDS

## Miss Amy Johnson's Lone Flight to Australia

MISS AMY JOHNSON, the 22-year old Yorkshire girl, member of the London Aeroplane Club and only airwoman holding the Air Ministry Ground Engineer's Licence, set out from Croydon on May 5 with the ambitious intention of flying solo to Australia—and incidentally, with the hope of beating Bert Hinkler's record of 15½ days for the journey. Her machine is the D.H. "Gipsy Moth," originally flown by Capt. Hope, which has, of course, been fitted with extra



Miss Amy Johnson, of Hull, who left Croydon on May 5 for Australia, piloting a D.H. "Gipsy-Moth." Miss Johnson, who is the only woman to hold an Air Ministry ground engineer's licence, hopes to beat Bert Hinkler's record of 15½ days for the journey. (FLIGHT Photo.)

petrol tankage for the flight. Miss Johnson was ready to start from Croydon at dawn, but owing to a slight delay did not get away until just before 8 a.m., escorted by five L.Ae.C. machines. Up to the time of writing she has been making excellent progress; she reached Asperne aerodrome, Vienna, just before 6 p.m. in the evening of May 5, having completed about 800 miles non-stop. The next day she made another fine 800 miles non-stop flight to Constantinople, via Belgrade and Sofia. She was received by the Turkish commander of the aerodrome, and stated that the flying conditions had been fine except for rainstorms over the Balkan mountains.

## Lindbergh's Fast Flight Across America

COL. CHARLES LINDBERGH and his wife, on April 20, flew across the American continent from Los Angeles to New York at an average speed of 180 m.p.h. The machine used was a Lockheed "Sirius" low-wing monoplane. The object of the flight was to test the theory that greater speed could be attained by flying at a great altitude. Consequently, most of the flight was carried out at a height of from 14,000 ft. to 15,000 ft. In this way the machine was able to pass above an area of bad weather to the east of Wichita. Both Col. and Mrs. Lindbergh wore heavy fur-lined, electrically heated clothing and Meyrowitz goggles with British-made lenses. The Lockheed monoplane took off from Glendale aerodrome at 5.30 a.m. and followed the route of the Trans-

continental Airways to Wichita, Kansas. There the pilot landed for 20 minutes and took on 245 gallons of petrol, without switching off the engine. Although bad weather conditions did actually cause deviations of as much as 100 miles from the direct route, Col. Lindbergh landed at Roosevelt Field, Long Island, at 11.11 p.m., half-an-hour earlier than he had expected.

Mrs. Lindbergh acted as navigator throughout the flight. The flight occupied 14 hours, 45 minutes.

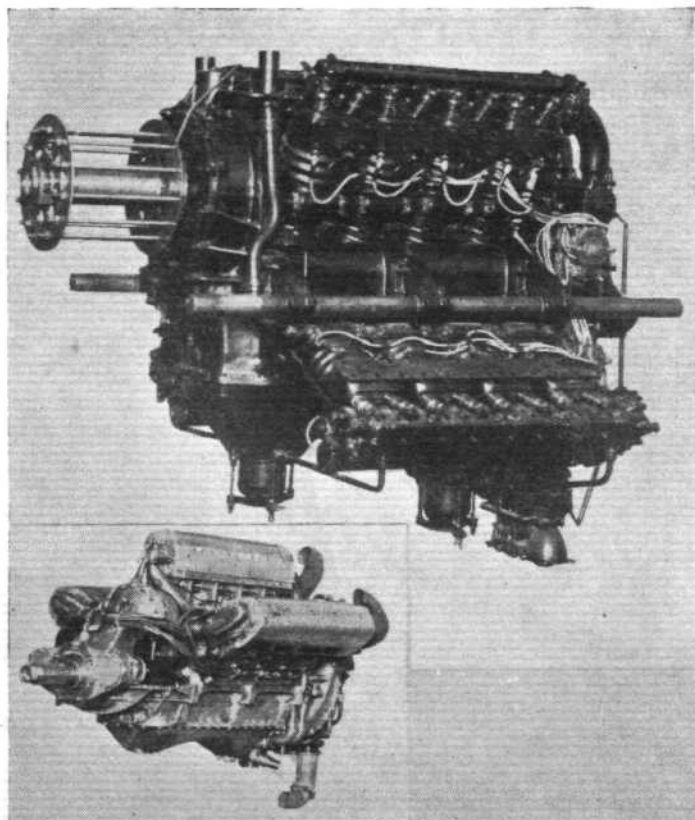
Col. Lindbergh said that the success of this experimental flight did not definitely prove the point of the superiority of high altitudes for regular routes. Further experiments would be necessary, and he proposed to undertake them. The previous best time across the continent was made by Capt. Hawkes last year in 17 hours 38 minutes. This test was a non-stop flight, but Col. Lindbergh said that he might have taken longer if he too had had to fly non-stop.

## The Aga Khan's Prize

THERE are now three Indian pilots competing for the Aga Khan's prize of £500 for the first Indian to accomplish a solo flight between India and England. Mr. Man Mohan Singh, who started from England some time back and met with two long delays, has now reached Aboukir, arriving there on May 5. Mr. Engineer, who is also flying Eastward (and who accompanied Mr. R. N. Chawla on his recent flight to England), is close behind, he having left Benghazi for Tobruk the same day. The third competitor is Mr. G. R. D. Tata, a member of the Bombay Flying Club, who started from Karachi on May 3. He left Basra for Baghdad on May 5.

## French Airwoman's Endurance Record

MLLE. LINA BERNSTEIN, the French airwoman, has broken the air endurance record for women by flying for 35½ hours. She ascended from Le Bourget on May 1 in a Farman F.190 (230 h.p. Salmson) and continued until the following afternoon, and thus easily beats the previous record held by Madame M. Bastie. She also holds the record (1,687 miles) for longest non-stop flight in a straight line.



THE SAME, ONLY DIFFERENT! The great progress that has been made in aero-engine construction during the last few years is indicated in this picture. It shows two Napier engines—the "Cub," produced in 1921, and, below it, the latest racing engine. The "Cub" developed 1,000 h.p. and weighed 2,450 lb., while the smaller engine develops 1,275 h.p. and weighs only 1,130 lb.!

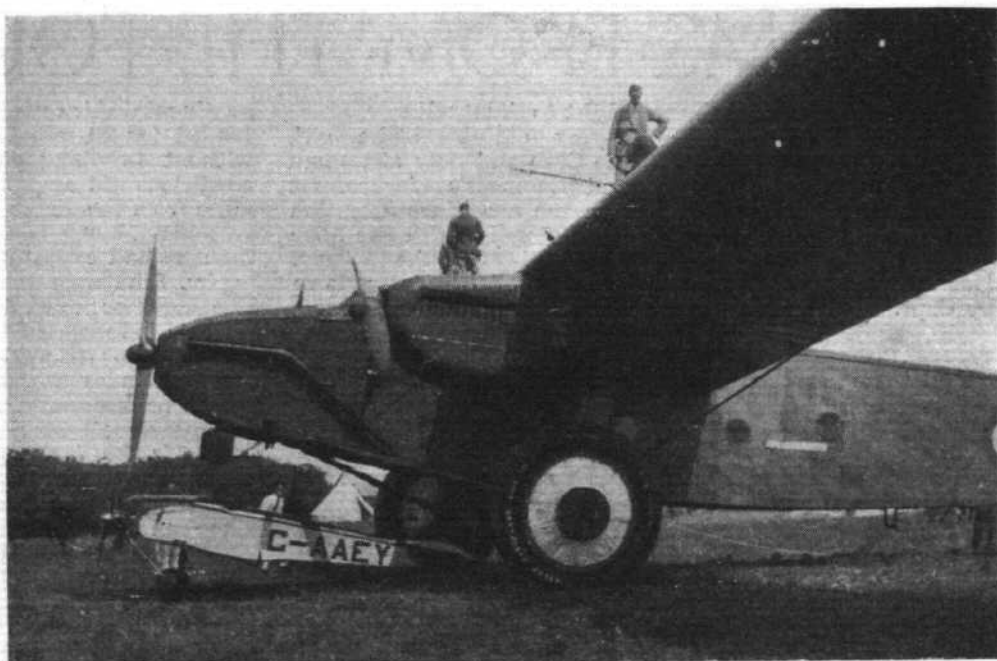
### British Empire Air Mileage

It has frequently been stated, and no doubt it is commonly believed, that in the matter of civil air lines the British Empire is very backward. Lieut.-Commander Kenworthy, in a debate in the House of Commons Committee on Monday, May 5, stated that it was "a woeful fact" that we were still only the sixth or seventh nation in civil flying. To this Mr. Montague replied "if you are going to make comparisons you must make fair comparisons—you must compare Imperial conditions with Imperial conditions; you must compare Imperial services with Imperial services. If you do that, and treat the other countries upon the same lines, we are not the seventh but the second." He gave the total of British Empire air miles as 20,850, without counting the projected service to South Africa. This figure was only surpassed by the United States with 46,622 miles. France came third with 17,500; Germany fourth with 16,500; and Italy fifth with 7,803. Mr. Montague added that if passenger miles were counted the comparison would be in favour of this country, because in the long services of some other countries there were some routes only occasionally flown over where the passenger mileage was comparatively small.

So once again it appears that British efforts are not so contemptible as our pessimists would have people believe.

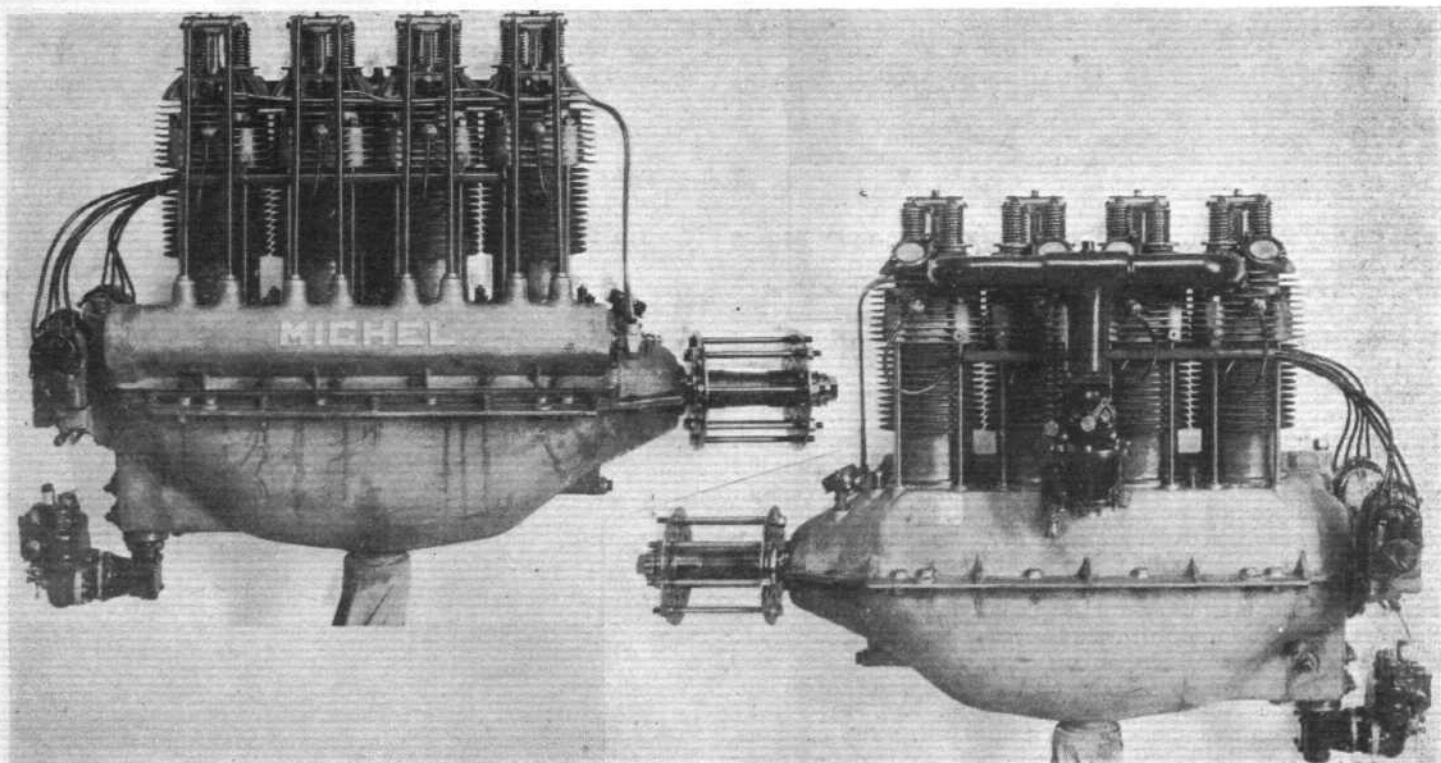
### New Ford Departures

Two important new departures in connection with aircraft manufactured by the Ford Motor Co. have just been announced by company officials. The first is that henceforth



**DIGNITY AND IMPUDENCE:** The Gadfly goes to bed beneath the nose of the Inflexible!

the smaller, 4-AT model, will be equipped with the new Packard Diesel engine of 225 h.p., if desired, as well as with either three 300 h.p. Wright "Whirlwind" engines or with three Pratt and Whitney "Wasp" 300 h.p. engines. The second departure involves a substantial reduction in price in both this model and in the larger, or 5-AT, model. The 4-AT model will now sell at £8,230, as against the original price of £10,082, while the price of the 5-AT model (which was exhibited at the last Olympia Aero Show) has been reduced from £11,316 to £10,288.



**THE MICHEL A.M.14, MARK II "DUTY" ENGINE:** This is a more recent model than that described in our issue of April 11, and develops normally 122 h.p. at a speed of 1,600 r.p.m. This engine, at present on view in Selfridge's Aviation Department, differs from the older model mainly in the arrangement of the cylinder heads, valves, etc. M. Neher, of Aviation Michel, is at present in this country negotiating a British agency, and can be communicated with regarding this, or other matters concerning these engines, at 51, Gloucester St., Victoria, S.W.1. (Flight Photos.)



# PERSONALS

## Married

The marriage took place at St. John's, Ranmoor, Sheffield, on April 12, of Flight-Lieut. EUSTACE JACK LINTON HOPE, son of the late Maj. Linton Hope and Mrs. Hope, of Kingshott, Fernhurst, Sussex, and Miss EVELYN HOPE BALFOUR, second daughter of Sir Arthur and Lady Balfour, of Ropes, Fernhurst, Sussex, and Riverdale Grange, Sheffield. Mr. G. Macpherson, R.A.F., was best man.

Flight-Lieut. J. V. KELLY was married on April 30, at St. Mary's, Hampstead, to Miss F. GARNETT.

Sqdn.-Ldr. RICHARD BURNARD MUNDAY, D.S.C., A.F.C., R.A.F., elder son of Major-General and Mrs. R. C. Munday, of Port Royal, Plymouth, was married, on April 26, in Brussels, to MARIE JOSE, eldest daughter of M. and Mme. DE REUL, of 49, Boulevard Brand-Whitloche, Bruxelles.

Flying Officer THOMAS GEOFFREY PIKE, R.A.F., youngest son of the late Captain S. R. Pike, R.A., and Mrs. Pike, of Tonbridge, was married on April 23, at St. Mary Magdalen's Church, Harlow Common, to Miss KATHLEEN ALTHEA ELWELL, eldest daughter of Major and Mrs. Herbert Elwell, of Harlow, Essex.

On April 22, 1930, at St. Jude's Church, Birmingham, Flight-Lieut. R. W. GORDON WEST, R.A.F. (retired) was married to MARY CHARLOTTE McEACHRAN.

The marriage took place on April 26, at St. Paul's, Knightsbridge, of Flight-Lieut. FREDERICK WILLIAM WISEMAN-CLARKE, son of Mr. and Mrs. Wiseman-Clarke, of 61, Cadogan Square, and Miss CYNTHIA MARY PEMBERTON, daughter of Major and Mrs. Pemberton, of 6, Bedford Gardens House, Campden Hill. Squadron-Leader C. A. Stevens was best man.

## To be Married

The engagement is announced between Squadron-Leader THOMAS WALKER ELMHIRST, A.F.C., R.A.F., son of the Rev. W. H. Elmhirst and Mrs. Elmhirst,

of Elmhirst, Barnsley, Yorkshire, and KATHARINE GORDON, daughter of Mrs. BLACK, and the late William Black, Chapel, Kingskettle, Fife.

The engagement is announced between FREDERICK WALTER HICK HALL, R.A.F., only son of the late F. W. Hick Hall, of Ruffside Hall, Northumberland, and Mrs. James Willie Heslop, of Broadlands, Charmouth, Dorset, and Joyce, youngest daughter of Mr. and Mrs. AUSTEN WHETHAM, of Bridport, Dorset.

The engagement is announced between BERNARD McENTEGART, R.A.F., third son of the late William McEntegart and Mrs. McEntegart, of West Derby, Liverpool, and ANNE, youngest daughter of Mrs. PATMORE, Brac, near Dumfries, Scotland.

The engagement is announced, and the marriage will take place very quietly in June, between Flight-Lieut. FRANCIS CHARLES THORN ROWE, R.A.F., only son of Mr. and Mrs. C. F. Rowe, Mill End, Chagford, Devon, and CONSTANCE ISOBEL PATTULLO, B.M., B.Ch.Oxf., 144, Harley Street, W., elder daughter of Mr. and Mrs. J. D. Pattullo, Hurst Lea, Albury Heath, Surrey.

The engagement is announced between Mr. A. H. WILLETTTS, R.A.F., second son of the late Mr. A. J. Willetts and Mrs. A. J. Willetts, and NANCY HUGHES, elder daughter of Mr. and Mrs. W. HUGHES WHATLEY, of Trentham House, Emsworth, Hampshire.

## Death

The death occurred on April 14, at Canonbury, London, of ROBERT WILLIAM COAN, aged 66 years.

## Item

Captain WALTER GEORGE RAYMOND HINCHLIFFE, of Hock Huis, Peaks Hill, Purley, who left Cranwell Aerodrome on March 13, 1928, to pilot the Hon. Elsie Mackay to America, and in the words of the grant, died "on or since March 13, 1928, at some place unknown, intestate," left property now valued for probate at £32.

# IN PARLIAMENT

## Air Mail Service—Bombay and Karachi

MR. BENN said on April 29, in reply to Major Graham Pole, proposals have been received by the Government of India for the establishment of a regular service of mail-carrying aeroplanes connecting Bombay with Karachi, but a difficulty in the way of an early decision is that no aerodrome near Bombay fit for regular use throughout the year is at present available.

Lieut.-Commander Kenworthy: Why not use seaplanes and land them on the back waters of the harbour at Bombay, which is very suitable?

## Civil Aviation

MR. RAMSAY MACDONALD, on April 30, in reply to Commander Bellairs, said civil aviation in this country is not under military control, the Air Ministry being a Department which has a number of civil, in addition to its military, functions. His Majesty's Government do not contemplate any alteration in the existing system.

Commander Bellairs: In view of the fact that no confidential details are

involved, will the Government consider the advisability of holding a public inquiry into the whole matter of placing civil aviation on the same footing as the mercantile marine, and independent of the Air Ministry?

The Prime Minister: That is a totally different question, but, if the question is put in the paper, I will give him a reply.

## Aerial Warfare

COMMANDER BELLAIRS asked the Under-Secretary of State for Air what steps have been taken to ratify the rules for restricting aerial operations in war to military objectives, as agreed to by the International Commission of Jurists at The Hague in 1923, especially in regard to prohibitions against inflicting injuries to non-combatants and civilian property?

Mr. Montague: It was not found possible to obtain the agreement of all the Powers concerned in the draft rules referred to and no steps have consequently been taken to ratify them.

# MODELS

## THE MODEL AIRCRAFT CLUB T.M.A.C.

IN spite of the uncertain weather conditions, a large gathering of members and friends was present on Wimbledon Common on Saturday, May 3, when three competitions were most successfully decided. The competitions were in progress and most of the machines were flying well, although the models appeared to be climbing rather sluggishly, when a thunderstorm accompanied by heavy rain caused the crowd to make for shelter.

The delay of an hour did not damp the enthusiasm of the members, however, for immediately the heavy rain ceased the flying recommenced. The ladies showed just how well they could fly their models in the competitions. Mrs. Willis impressed everyone present by making some excellent flights with a beautiful small-fuselage machine, and is to be congratulated for carrying off first prize for the second time in succession with a flight of 46 seconds' duration.

Mr. Rutherford made some impressive flights from the ground with his small 1½-oz. fuselage machine; great credit is due to him for getting this very small model off the rain-sodden turf so successfully.

Master Robinson not only won the Junior competition, but also succeeded in winning the competition for heavy-weight models with a fine flight of 50 seconds' duration with a 10-oz. fuselage model. Other fine flights were made by Messrs. Trevethick, Welding, Knight, Child, and Davies in the heavy-weight competition, and by Messrs. Englefield, Willis, Newell, and Master Willis in the light-weight competition.

At the end of an enjoyable afternoon's flying Mrs. A. E. Jones presented the prizes to the successful competitors.

Time-keepers: Mr. S. H. Stockman, Mr. C. A. Rippon, and Miss V. Judge. Judges: Mr. T. Newell, Mr. D. Mincher, Mr. A. T. Willis.

## LIGHT-WEIGHT COMPETITION (Fuselage models under 8 oz.) Three flights.

Name and Type.	1	2	3	Best.	
*T. Newell .. (r.o.g.)	70.0	73.0	69.0	73.0	1st.
†S. Rutherford (r.o.g.)	51.0	55.0	49.5	55.0	2nd.
‡G. Englefield .. (h.l.)	9.0	9.0	50.25	50.25	3rd.
*A. T. Willis .. (h.l.)	49.5	43.5	34.0	49.5	4th.
* Falcon, 7 oz.	† 1½ oz.	† High wing.			

## HEAVY-WEIGHT COMPETITION (Fuselage models 8 oz. or over.) Three flights.

Type: High wing.					
M. Robinson 10 oz. (h.l.)	50.0	28.0	43.0	50.0	1st.
R. J. Trevethick 16.5 oz. (h.l.)	38.0	32.5	28.0	38.0	2nd.
J. Welding 19 oz. (h.l.)	30.0	31.0	31.5	31.5	3rd.
D. Dent — (h.l.)	31.0	11.25	12.0	31.0	
W. Davies 10 oz. (h.l.)	31.0	—	—	31.0	
M. Knight — (h.l.)	28.8	29.0	28.0	29.0	
G. J. Child 16 oz. (h.l.)	16.0	26.5	20.0	26.5	
E. Hunter — (h.l.)	10.25	20.5	—	20.5	
C. Burchell 22 oz. (h.l.)	17.0	18.0	18.0	18.0	

## LADIES (AND JUNIORS) (age under 16 years) (Any type of model aeroplane.) Three flights.

*Mrs. Willis .. (h.l.)	39.0	3.5	46.0	46.0	1st.
*Master Willis .. (h.l.)	31.5	32.5	34.0	34.0	2nd.
*Master Walker (h.l.)	25.3	—	—	25.3	3rd.
*Miss Briggs .. (h.l.)	20.0	24.0	—	24.0	
*Master Kimpton (h.l.)	22.0	20.0	—	22.0	
†Mrs. D'Urban (h.l.)	15.0	21.0	25.0	25.0	

\* Fuselage. † Spar.

The next meeting of the T.M.A.C. will be held on Wimbledon Common on June 7, 1930, and will be a handicap competition, full particulars to be published later. Competition Secretary: Mr. T. Newell. Hon. Secretary: Mr. A. E. Jones, 48, Narcissus Road, West Hampstead, N.W.6.

## A.I.D., T.S.A. ANNUAL DINNER

### Larger Attendance Than Ever

**S**OON there will be difficulty in finding accommodation for all the hosts and guests who gather annually for the dinner of the A.I.D. Technical Staff Association. At the annual dinner held at the Hotel Russell in Russell Square on Friday last, May 2, the party numbered close upon 340, and as the aircraft industry grows, and the A.I.D. with it, Mr. Jack Jarvis, who has been in charge of the organisation from the beginning of these annual dinners, will have his difficulties, already considerable, further increased. So far he has succeeded admirably, but every year one comes away feeling that the climax has been reached, and that even Mr. Jarvis cannot do the impossible. Yet somehow he always does.

For the benefit of readers who are not familiar with the composition of the A.I.D. Technical Staff Association it may be pointed out that this is a body affiliated to the Institution of Civil Servants, established to safeguard the interests of members of the Air Ministry establishment known as the Aeronautical Inspection Directorate. The function of the latter, it is almost superfluous to tell readers of this journal, is to supervise in detail the work of the construction of aircraft, both civil and service. For the year 1930 the Council of the Technical Staff Association of the A.I.D. is composed as follows:—Chairman: Mr. J. J. A. Gilmore, B.A., A.R.C.Sc.; vice-chairman: Mr. L. W. Warner, A.M.I.A.E.; treasurer: Mr. R. W. Soley, M.A., B.Sc.; secretary: Mr. H. Chambers. Members of the Council: Messrs. E. A. Blundell, G. Bullock, H. Dew, A. McIsaac, W. R. V. Morgan, F. B. Sutton, A. E. Steele, and F. R. Swain.

After a very excellent dinner, the loyal toast was honoured, and the toast of the A.I.D. was then proposed by Air Marshal Sir John F. A. Higgins, K.C.B., K.B.E., D.S.O., A.F.C., Air Member for Supply and Research. Sir John began by referring to the fact that he had been invested by Col. Outram with the new A.I.D. tie (an innovation among A.I.D. people which is not yet entirely official, but which already shows promise of becoming not only popular but universally adopted by members of the A.I.D.). Referring to the fact that he had been privileged to speak to them on previous occasions, Sir John recalled that the first time he was present at an A.I.D. dinner he referred to the great variety of work which the A.I.D. had to undertake. That variety of work had now considerably increased, as had also the volume of work carried out, but he was glad to be able to state that the quality was as high as in the days when the quantity was smaller. He thought the A.I.D. could be proud of the high standard reached.

One of the things which had added variety to the work to be carried out was the construction of the new airships. The designers of the two airships had received a goodly and well-deserved share of credit, but he thought it was time somebody else shared that credit. He had seen in the press no reference at all to the work of the A.I.D. in connection with the inspection of the vast amount of structural work of the airships. Yet that work had been a very great task. It was work which had been rather outside the usual work of the A.I.D., but it could be said that the A.I.D. had carried it out with good efficiency. He might mention that when, shortly it was hoped, R 100 made her flight to Canada and back, a representative would be on board, so that when the airship was at the mooring mast in Canada she should not cry for her nurse.

Sir John also referred to the changes which metallisation of aircraft had brought about in the work of the A.I.D. The ease with which the industry had changed over, in some three years, from wood to metal construction had been remarkable. A very gratifying feature of the work of the A.I.D. was the good relationship which existed between the aircraft industry and the representatives of the A.I.D. The industry looked upon them as valuable assistants and not as enemies. He was glad to be able to point out that it was not only at home that the work of the A.I.D. was appreciated. Abroad also the A.I.D. was held in high esteem, and he recalled that representatives had gone out to Japan to instruct them in the art of inspection and supervision. He had received from the Japanese government a message of appreciation of the good work which the A.I.D. representatives sent out to Japan as instructors had already done.

Lieut.-Col. H. W. S. Outram, C.B.E., Director of the Directorate of Aeronautical Inspection, in replying to the toast, complained that he had already spoken for some three hours that day to many of those present. He pointed out that there had been considerable growth in the size and work

of the A.I.D. That growth, however, had not been as great as the increase in the size of these annual dinners, and he was sorry to say that several applications to be present had had to be turned down, due to lack of accommodation. The large increase in the size of their annual dinner party was, he was pleased to note, due to the A.I.D. having made many new friends among the new firms established for the building of civil aircraft. He was glad to see so many representatives of the industry there that evening. Reference had been made to the A.I.D. in relation to airships. They would be glad to learn that a few days ago an Assistant Inspector of Airships had been appointed. He recalled with pleasure that a few, at any rate, of the A.I.D. personnel had been connected with airships for a very long time, and quoted the case of two in particular, one of whom had been with airships since 1913, and the other since 1915.

Sir John Higgins had said some very nice things about the A.I.D. While some of these things were deserved, he concluded, no one outside the A.I.D. itself knew how far they were from perfection.

Mr. J. J. A. Gilmore, in proposing the toast "The Visitors," said the A.I.D. was proud of the visitors they always managed to produce at these dinners. This year they had dared greater things than ever, and had with them, for the first time, the Under Secretary of State for Air, Mr. F. Montague. Three years ago they would not have dared to invite an Under Secretary, but they had thought that the time was now favourable. He expressed the hope that Mr. Montague might be able to persuade the Treasury to loosen the purse strings a little. Also for the first time they had with them that evening the Director of Civil Aviation, Sir Sefton Brancker. The press was in the habit of referring to him as the "Air Chief." That was a distinction well earned. The A.I.D., however, were referred to as bureaucrats. That was not merited. Mr. Gilmore recalled that Sir John Higgins had attended every A.I.D. Annual Dinner since his accession to office. He was grateful to Sir John for coming to their dinners, but wondered rather that Sir John did not get tired of saying all the kind words about the A.I.D. which he had said not only that evening but also on earlier occasions, before he knew if they were true! As for Mr. McAnally, no A.I.D. dinner would be complete without him. Mr. McAnally had just visited Greece, and so he (Mr. Gilmore) would not dare to quote anything in foreign languages, especially not in Greek. As for the other visitors, he was glad to see almost every firm of the industry represented. He gathered that there were those who desired to see Air Ministry control abolished. (He did not think they wished the Air Ministry abolished). It was possible to visualise the Air Ministry reduced to one man, and that he would be reduced to saying to a firm: "Please send us some machines. Any type will do, and any price above £1,000." He might send all orders to Cricklewood, or to Hayes, or to Kingston, or to Bristol. That would be serious for the rest of the industry!

Mr. Montague, in replying, said he had not been associated with aviation long enough to become really familiar with all its many aspects, but he *had* discovered in aviation a new spirit and a new interest in life.

Sir Sefton Brancker recalled that the A.I.D. was the oldest Government institution dealing with flying. They used to be known as the "O.K. Department." That still applied. The R.F.C. and R.N.A.S. were changed into the R.A.F., and many other changes had taken place. The A.I.D. had not changed. He thought they would be interested to know who was their mother. He could definitely say that Col. O'Gorman was the mother of the A.I.D. It was more difficult to decide who was their father. Several had claimed that distinction, but probably General Henderson was really their father.

Sir Sefton pointed out that many people had been in the A.I.D. since its inception, and read a list of a dozen names or so. Sir John Higgins had referred to the esteem in which the A.I.D. was held abroad. With that he could heartily agree. "The A.I.D.," Sir Sefton said, "has never let me down. Wherever I go abroad the A.I.D. has a gilt-edged reputation." The Navy used to be known as the "Silent Service." He was not sure that still applied, but certainly the A.I.D. was the "Silent Service" of aviation. On the other hand, his department (the Directorate of Civil Aviation) was the one to shout. He had to sell aviation to people.

Mr. C. G. Grey said that the A.I.D. had put the hall mark on British aircraft. There were certain Bolshies in the

(Concluded at foot of next page)



# THE ROYAL AIR FORCE

London Gazette, April 29, 1930

## General Duties Branch

The follg. are granted short service comms. as Pilot Officers on probation with effect from and with seniority of April 11:—J. W. P. Armitage, G. V. Barber, R. J. W. Barnett, C. F. Birks, G. A. Bolland, J. A. S. Brown, L. A. Bullard, R. G. E. Catt, R. N. Clarke, L. J. Crosbie, K. B. B. Cross, E. Dawson, A. E. Dobell, G. F. K. Donaldson, R. B. Harrison, H. O. Haughton, P. Haynes, E. J. N. Heaven, G. H. Leftwich, D. L. McAllister, D. W. Morrish, J. G. B. O'Hagan, A. E. B. Trappes-Lomax, J. L. M. White, G. M. Williams.

The follg. Pilot Officers on probation are confirmed in rank:—W. S. Monroe (Jan. 21); W. N. H. Banks, E. C. Durbin, A. C. Larmuth, F. A. Wardell (April 2). Pilot Officer L. S. Tindall is promoted to rank of Flying Officer (June 14, 1928) (substituted for *Gazette*, Sept. 11, 1928); Flight Lt. S. Nixon, O.B.E., is placed on retired list and is granted permission to retain rank of Squadron Leader (April 30).

## Medical Branch

Flying Officer J. L. Groom, M.R.C.S., L.R.C.P., is promoted to rank of Flight Lt. (April 2).

## RESERVE OF AIR FORCE OFFICERS

### General Duties Branch

The follg. Pilot Officers on probation are confirmed in rank:—G. P. Jewett (April 19); F. M. Walker (April 20); C. Langley (April 21); T. H. Bevan (April 23).

## PRINCESS MARY'S ROYAL AIR FORCE NURSING SERVICE

The follg. Sisters are appointed to the permanent service (April 1):—Miss W. M. Cave, Miss O. A. Keyse, Miss A. M. Rodd, Miss F. M. Pepper, Miss E. M. Dowdeswell, A.R.R.C., Miss M. C. Rattenberry.

## ROYAL AIR FORCE INTELLIGENCE

### Appointments.—The following appointments in the R.A.F. are notified:—

#### General Duties Branch

Squadron Leader J. Noakes, A.F.C., M.M., to No. 5 Flying Training School, Sealand; 22.4.30.

Flight Lieutenants: W. D. Gairdner, D.F.C., to H.Q., Wessex Bombing Area, Andover; 27.4.30. J. T. Paine, to H.Q., Iraq Command; 3.3.30. D. H. Carey, to R.A.F. Depot, Uxbridge; 2.4.30. C. Feather, to No. 11 Sqdn., India; 24.3.30. E. E. Arnold, to No. 32 Sqdn., Kenley; 12.4.30. E. Burton, to H.M.S. *Eagle*; 23.4.30. J. M. J. C. J. I. Rock-de-Besombes, to R.A.F. Depot, Uxbridge; 12.4.30. R. W. E. Bryant, to No. 6 Sqdn., Middle East; 1.4.30. R. M. Davy, to Station H.Q., Heliopolis; 31.3.30. J. D. S. Denholm, to No. 1 Air Defence Group H.Q.; 15.4.30. I. E. Brodie, to No. 43 Sqdn., Tangmere; 11.4.30. W. E. Symonds, to No. 58 Sqdn., Worthy Down; 13.4.30.

Flying Officers: W. Wheatley, to Home Aircraft Depot, Henlow; 14.4.30. R. C. Greenhalgh, to No. 15 Sqdn., Martlesham Heath; 15.4.30. A. K. K. Calwell, to Elec. and Wireless Sch., Cranwell; 31.3.30. H. S. Martin, to No. 27 Sqdn., India; 17.3.30. W. C. McNeil, to Sch. of Naval Co-operation, Lee-on-Solent; 27.3.30. G. Francis, to Station H.Q., Hal Far, Malta; 17.3.30. A. T. C. Hazledine, to R.A.F. Depot, Uxbridge; 2.4.30. P. J. Connolly, to R.A.F. Depot, Uxbridge; 10.4.30. A. Wall, to No. 60 Sqdn., India; 18.4.30.

Pilot Officers: A. M. Cowell, to No. 27 Sqdn., India; 17.3.30. M. V. de atge, to R.A.F. Depot, Uxbridge; 25.3.30. P. B. Lusk, to No. 27 Sqdn.,

India; 17.3.30. E. M. Morris, to No. 1 Sch. of Tech. Training (App's.) (Halton); 24.4.30. E. R. M. Walker, to No. 12 Sqdn., Andover; 11.4.30. E. E. Ellison, to No. 4 Sqdn., S. Farnborough; 1.4.30. G. D. Fleming, to No. 10 Sqdn., Upper Heyford; 1.4.30. D. A. Messiter, to No. 41 Sqdn., Northolt; 1.4.30. H. R. Black, to No. 111 Sqdn., Hornchurch; 1.4.30. The undermentioned are all posted to R.A.F. Depot, Uxbridge on appointment to Short Service Comms. as Pilot Officers on probation, with effect from 11.4.30:—J. W. P. Armitage, G. V. Barber, R. J. W. Barnett, C. F. Birks, G. A. Belland, J. A. S. Brown, L. A. Bullard, R. G. E. Catt, R. N. Clarke, L. J. Crosbie, K. B. B. Cross, E. Dawson, A. E. Dobell, G. F. K. Donaldson, R. B. Harrison, H. O. Haughton, P. Haines, E. J. N. Heaven, G. H. Leftwich, D. L. McAllister, D. W. Morrish, J. G. B. O'Hagan, A. E. B. Trappes-Lomax, L. J. M. White, and G. M. Williams.

#### Stores Branch

Wing Commander W. J. B. Curtis, O.B.E., to H.Q., Coastal Area for Store Staff duties; 22.4.30.

#### Accountant Branch

Flying Officers: R. W. Collinson, to No. 45 Sqdn., Middle East; 11.4.30. T. P. E. Campbell, to No. 216 Sqdn., Middle East; 27.3.30.

Pilot Officer K. Fraser, to Station H.Q., Andover; 13.4.30.

## NAVAL APPOINTMENTS

The following appointments were made by the Admiralty on April 28:—Lieut. F./O., R.A.F.—A. M. Rundle, re-attached to R.A.F. and appointed to *Victory*, for R/T course (April 28), and to *Enterprise*.

## AIR MINISTRY NOTICES TO AIRCRAFT OWNERS AND GROUND ENGINEERS

### "Jupiter" Engines: Magneto Setting

1. THE attention of aircraft owners and ground engineers is directed to an alteration recently introduced to the setting of magnetos on all "Jupiter" engines except Series IV. This alteration consists of changing the previous standard setting of 42° to one of 35° before top dead centre. Both these readings are taken with the contact breaker in the fully advanced position.

2. Bench and flight tests have established that a general improvement as regards smoothness of running, lowering of cylinder temperature, and reduced liability to detonation, etc., is obtained by the use of the 35° setting.

3. Aircraft owners and ground engineers should ensure that the alteration referred to herein is effected at the earliest opportunity.

(No. 10 of 1930.)

### Certificates of Airworthiness: Flight Requirements—Applicants' Flying Trials

#### Landplanes and Seaplanes

1. IN the Air Navigation Directions, Section II.E, it is laid down that "On completion of the aircraft and of any modifications which may have been required under paragraph 12 or paragraph 18 as the case may be, flying trials will be carried out by the applicant's or contractor's pilot in the presence of representatives of the Secretary of State."

2. In accordance with these directions, the following requirements in respect of Applicants' Flying Trials are laid down.

3. Aircraft of the first category (Normal) and of the third category (Acrobatic) Sub-divisions (a), (b), (c), (d) and (e) must carry out the following tests:—

**Handling Trials.**—These trials to be performed at the proposed limiting centre of gravity positions, the total weight of the aircraft to be the maximum permissible corresponding to these conditions of loading.

4. Aircraft of the third category (Acrobatic) sub-divisions (a), (b), (c), (d) and (e) must carry out the following additional tests:—

(i) **Spinning.**—This test to consist of four complete turns of a spin in each direction.

The test must be performed with the C.G. of the aircraft at its rearmost limit, the total weight to be the maximum permissible under that condition of loading.

The following may be regarded as a satisfactory spinning characteristic:—After four turns of a spin, with controls fully applied and tailplane adjustment in the worst position, the aircraft is to recover in less than two turns on reversal of the controls.

The aircraft should pass from the spin to a normal dive from which horizontal flight can be resumed without abnormal loss of height.

**Note.**—The above requirement applies only to those aircraft which can be spun. Inability to perform this manoeuvre will not disqualify an aircraft from obtaining an Acrobatic Certificate of Airworthiness.

(ii) **Looping and Rolling.**—The aircraft must behave satisfactorily during these manoeuvres.

(iii) **Diving.**—The aircraft must be dived to a speed not less than 50 per cent. in excess of its maximum level flight speed or at its terminal velocity, whichever is the least. This test must be performed with the C.G. of the aircraft at its foremost limit, the total weight to be the maximum permissible under that condition of loading.

5. It is proposed in due course to incorporate the above requirements as a Leaflet in Air Publication 1208, "Airworthiness Handbook for Civil Aircraft."

(No. 11 of 1930.)

### D.H. 60 X. & G. Wooden Fuselage "Moth" Aircraft with Gipsy, Cirrus III or Hermes Engine: Modification of Front Engine Brackets

1. CASES of fracture of the front engine bracket have occurred on aircraft of the above types. All such aircraft are, therefore, to be examined immediately for the presence of cracks in the furrow in the side of the bracket. If any cracks exist, the aircraft is not to be flown until the modification described herein is incorporated. In any case, the modification described herein is to be incorporated within two months of the date of this notice and the brackets should be frequently examined during that period.

2. The modification consists of removing the front engine brackets, parts No. H.22494, and substituting the new brackets, parts No. H.31682.

3. No Certificate of Airworthiness will be renewed until this modification has been satisfactorily incorporated.

(No. 12 of 1930.)

## A.I.D., T.S.A. Annual Dinner

(Concluded from page 522.)

industry who wanted the A.I.D. abolished. He was sure that the industry would still keep the A.I.D. going in order to keep the hall mark.

The T.S.A. was proposed by Mr. McAnally and replied to by Mr. Sloley, but as these speakers dealt with what may be regarded as family affairs of little concern to those outside the A.I.D., we will refrain from making indiscreet disclosures. Mr. McAnally promised next year, when he should be relieved

of his present responsibilities, to be very indiscreet and irresponsible, and if we have the good fortune to be invited to the dinner then, the temptation to record his speech may prove too great.

The lighter side of the entertainment was provided by Miss Ann Penn, Mr. Gillie Potter (who took his hat off to the Air Ministry) and Mr. Lionel King, who did wonderful things with a pack of cards. The work of Mr. Jack Jarvis in organising the dinner was praised by Major Bulman, and the evening came to a close (officially at least) with the singing of "Auld Lang Syne."

# AIR POST STAMPS

By DOUGLAS ARMSTRONG

(Editor of "The Stamp Collector")

THE growth of the air post service is reflected in the fact that a considerable proportion of the new postage stamps, at present appearing in all parts of the world, are in the form of special issues for aerial, as distinct from ordinary, postage. Something like 75 new varieties have been added to the air stamp collection during the first quarter of 1930, and many more are impending.

## Latest Italians

Symbolical designs by Professor E. Del Neri, which were awarded first prize in an artistic competition held by the Italian Air Ministry a few years ago, have been successfully adapted to a striking series of stamps inscribed "Posta Aerea" taken into use in Italy on March 12. Reproduced by the rotogravure process at the State Printing Office, Rome, the air stamp of 50 centesimi sepia bears the device of "Pegasus," the Horse of Heaven: a trophy of wings furnishes the motif of the 80 c. orange and the Spirit of Flight that of the 1 lira purple. Upon the 2 lire denomination, printed in sky blue, we have a flight of arrows, whilst "Pegasus" again finds place in the design of the 5 L. deep green. These picturesque and appropriate vignettes replace the somewhat stereotyped labels hitherto employed in connection with the Italian air post service.

## New York to Rio

Establishment of direct aerial communication between Rio de Janeiro by the newly inaugurated NYRBA service is signalled by the advent of a new Brazilian air mail stamp of 3,000 reis face value, the design of which, printed in deep violet, shows on the left the statue of Liberty, and on the right the Sugar Loaf Mountain characterising the two cities. Between them, against a background of the setting sun, is the figure of a seagull carrying a letter in its beak with the inscription "Posta Aerea."

## More "Correo Aereos"

Central America continues to provide the largest number of air stamp novelties. In the republic of Panama the opening of a regular air mail service between Panama City, Colon and David (P.R.) recently called for an aerial adhesive of 5 centesimos, which was extemporised by surcharging 25,000 copies of the regular 10 c. orange Express Delivery stamp with half its normal value pending preparation of a definitive 5 c. aero stamp. This appeared on January 25 and was followed on February 28 by a \$1 provisional air stamp in the form of the contemporary postage stamp of that value overprinted with an aeroplane device and the words "Correo Aereo" in red. Only 5,000 of the latter are said to have been issued.

Costa Rica has just produced an emergency air mail stamp of the nominal value 0.08 centavos surcharged upon the 1 Colon purple "Oficial" stamp of 1923. It seems that the blue 20 centimos stamp in use since 1926 with the vignette of an aeroplane, although lettered "Correo Aereo" is not in fact an air post stamp, but is available for ordinary postage.

Following a reduction in the rates of postage on air borne correspondence in Nicaragua new denominations of 15 and 30 centavos respectively will shortly replace those of 25 and 50 c. issued only in January last. These may possibly take the form of temporary surcharges until such time as the necessary supplies in the permanent design can be obtained from the printers in New York.

A long series of official air post stamps is about to be issued in Venezuela, pursuant to a Presidential decree of February 1, 1930. It will embrace fourteen denominations, ranging from 5 centimos to 3.70 Bolivars, amounting in all to 640,000 stamps. The design is in two parts. At the top are the words "E.E. U. U. De Venezuela" with "Correo Aero" in a semi-circle beneath, whilst at the bottom is an outline map of the country over which an aeroplane is flying. The adjacent Dutch Colony of Surinam (Dutch Guiana) is also credited with an impending issue of air post stamps.

## From the West Indies

In connection with the opening of the world's longest air mail route from Buenos Aires to Miami via the West Indies, the Black Republic of Hayti added a third value to its regular air stamp series, on March 3. It is identical in design with the 50 c. and 1 gourde already current, but valued 75 centimes and printed in deep marone.

Its neighbour, the Dominican Republic, has also provided a set of four air post stamps, similar in design to the single 10 c. value issued in 1928, showing an aeroplane over a map of the island and comprising 10 centavos orange, 15 c. red, 20 c. green and 30 c. blue. They made their debut on February 4, 1930.

# PUBLICATIONS RECEIVED

*The King's Regulations and Air Council Instructions for The Royal Air Force, 1928.* Amendment Lists Nos. 5 and 6 to Air Publication 958. H.M. Stationery Office, Kingsway, London, W.C.2. Price 3d. net.

*The Countryman.* April, May, June, 1930. No. 1. Vol. IV. J. W. Robertson Scott. Idbury, Kingham, Oxford. Price 2s. 6d.

*Aeronautical Research Committee Reports and Memoranda: No. 1217 (Ae. 376).*—Conditions for the Prevention of Flexural-Torsional Flutter of an Elastic Wing. By R. A. Frazer and W. J. Duncan. Dec., 1928. Price 9d. net. No. 1276 (Ae. 422).—The Effect of Span on Aircraft Performance. By W. G. Jennings. May, 1929. Price 1s. net. No. 1282 (Ae. 428).—Full Scale Experiments on High Tip Speed Airscrews. Comparative Performance Trials of Three Airscrews of Different Sections. Sept., 1929. Price 6d. net. H.M. Stationery Office, London, W.C.2.

*Air Power and The Cities.* By J. M. Spaight, C.B.E., LL.D. London: Longmans, Green and Co., Ltd. Price 15s. net.

*Revue des Forces Aeriennes.* March, 1930. No. 8. Gauthier-Villars et Cie., 55, Quai des Grands-Augustins, Paris.

*Aviation Year Book, 1930.* Edited by C. E. Lee. London: Sampson Low, Marston Co., Ltd. Price 5s. net.

*The Journal of "The Royal Aeronautical Society," with which is incorporated "The Institution of Aeronautical Engineers."* No. 232. Vol. XXXIV. April, 1930. The Royal Aeronautical Society, 7, Albemarle Street, London, W.1. Price 3s. 6d.

*Definitions and Formulae for Students: Aeronautics.* Compiled by John D. Frier. London: Sir Isaac Pitman and Sons, Ltd. 6d. net.

*Parachutes for Airmen.* By C. Dixon. London: Sir Isaac Pitman and Sons, Ltd. Price 7s. 6d. net.

*Flying Fury.* By James McCudden, V.C., D.S.O., M.C., M.M. London: John Hamilton, Ltd. Price 8s. 6d.

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## NEW COMPANY REGISTERED

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## AERONAUTICAL PATENT SPECIFICATIONS

(Abbreviations: Cyl. = cylinder; i.c. = internal combustion; m. = motors. The numbers in brackets are those under which the Specification will be printed and abridged, etc.)

### APPLIED FOR IN 1928

Published May 8, 1930

35,733. L. COSTANIEVICH. Screw propellers. (327,719.)

### APPLIED FOR IN 1929

Published May 8, 1930

4,573. R. V. MORSE. Aeroplanes. (327,805.)  
13,879. J. C. JOHNSON. Aircraft. (327,881.)  
16,334. W. C. WARD. Cushioned car for aircraft. (327,899.)  
17,178. VICKERS (AVIATION), LTD. Aeroplane wings. (314,376.)  
18,034. DR. G. LACHMANN. Aeroplane wings with guide blades. (313,849.)

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